

STANDARDS DEVELOPMENT BRANCH OMIE

369360000005377

**ACIDIC PRECIPITATION IN ONTARIO STUDY**

**1984 DAILY PRECIPITATION CHEMISTRY LISTINGS**

**ATMOSPHERIC PROCESS STUDIES UNIT  
AIR QUALITY AND METEOROLOGY SECTION  
AIR RESOURCES BRANCH  
880 BAY STREET,  
TORONTO, ONTARIO  
CANADA M5S 1Z8**

**NOVEMBER, 1985**

**A.P.L.O.S. COORDINATION OFFICE  
ONTARIO MINISTRY OF THE ENVIRONMENT  
6th FLOOR, 40 ST. CLAIR AVE. W.,  
TORONTO, ONTARIO  
CANADA, M4V 1P5**

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1984 daily precipitation  
chemistry listings.

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**ACIDIC PRECIPITATION IN ONTARIO STUDY**

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<u>Station Name</u>	<u>Map. Ref. No.</u>	
Longwoods	02	1
Melbourne	01	10
North Easthope	03	19
Wellesley	04	31

### **PART IV CENTRAL REGION DAILY PRECIPITATION CHEMISTRY LISTINGS**

<u>Station Name</u>	<u>Map Ref. No.</u>	
Balsam Lake	06	43
Dorset	08	55
Nithgrove	07	70
Raven Lake	05	82

### **PART V SOUTHEASTERN REGION DAILY PRECIPITATION CHEMISTRY LISTINGS**

<u>Station Name</u>	<u>Map Ref. No.</u>	
Charleston Lake	11	94
Railton	10	103
Graham Lake	12	109
Whitman Creek	09	118

### **PART VI NORTHWESTERN REGION DAILY PRECIPITATION CHEMISTRY LISTINGS**

<u>Station Name</u>	<u>Map Ref. No.</u>	
Fernberg	16	124
Forbes Township	13	130
Lac La Croix	15	142
Otter Island	17	145
Quetico Centre	14	151

## **PART I**

### **INTRODUCTION**

## **INTRODUCTION**

The data listed herein are a summary of the 1984 results acquired from the APIOS daily precipitation sampling network. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involved checking each record for chemical analysis integrity (e.g., ionic balance, observed vs. theoretical conductance). Gross limit checks were applied to the results. Upper limit were determined as  $M + 2S$  where median (M) and scale (S) represent robust estimates of mean and standard deviation respectively. Scale of the distribution was determined from interquartile distance, i.e.  $S=0.74$  (3rd quartile - 1st quartile) based upon logarithmically transformed results. In a situation where the distribution is significantly bounded by reported detection limits, S may be estimated as follows,  $S=1.48$  (3rd quartile - 2nd quartile). All lower gross limits were specified as zero. The data were also screened for outliers statistically by applying the Dixon Ratio test to the highest and lowest values observed in each region on a daily basis. Outliers were determined at the 95% level of confidence. Records and/or results deemed unreliable were flagged but not deleted. Detailed description of the validation procedures as applied to this data set is available from the Ministry upon request.

### **Station Identification**

The station identification is defined by four descriptive fields (e.g. Dorset/Daily/Aerochem #08). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

### **Daily Precipitation Chemistry Listings**

Sample type, as coded in the data listings, represents the best guess of the type of event which was sampled. All chemical analyses were done on unfiltered samples. Lab pH entries represent pH measurements at the main MOE Laboratory in Toronto while field pH entries represent measurements at regional laboratories. Remark codes (e.g., U,A) appended to individual results are defined in a later section. The tabulated results for "Free H"

were calculated from the reported Lab pH. Total hydrogen results, reported as "Total H", represent a titration of the sample with NaOH to an end point pH of 8.3.

**Calculation of Equivalent Precipitation Depth (mm)**

$$\text{Equivalent Precipitation Depth (mm)} = \frac{\text{Volume Collected (ml)} \times 15.6}{1000}$$

**Calculation of Observed Sampling Efficiency**

$$\% \text{ Efficiency} = \frac{\text{Equivalent Precipitation Depth (mm)} \times 100 \%}{\text{Gauge Depth (mm)}}$$

If the sample collection efficiency is less than 50% or greater than 120%, and if any of the field comment codes which affect sample collection efficiency (i.e. "F", "G", "H", "I", "J", "L", "P", and "M") is appended to the sample record, then the sample collection efficiency is flagged as unreliable.

**Field Comment Code Index**

A - Insects in sample	H - Volume incorrect
B - Leaves in sample	I - Event(s) missed
C - Particulates in sample	J - Wet side open when not precipitating
D - Fibres in sample	K - No precipitation collected
E - Sample not submitted	L - Part of event missed
F - Sampler malfunctioned	M - Dry side open when precipitating
G - Sample spilled or leaked	P - Gauge depth incorrect
	Q - Other

**Office Comment Code Index**

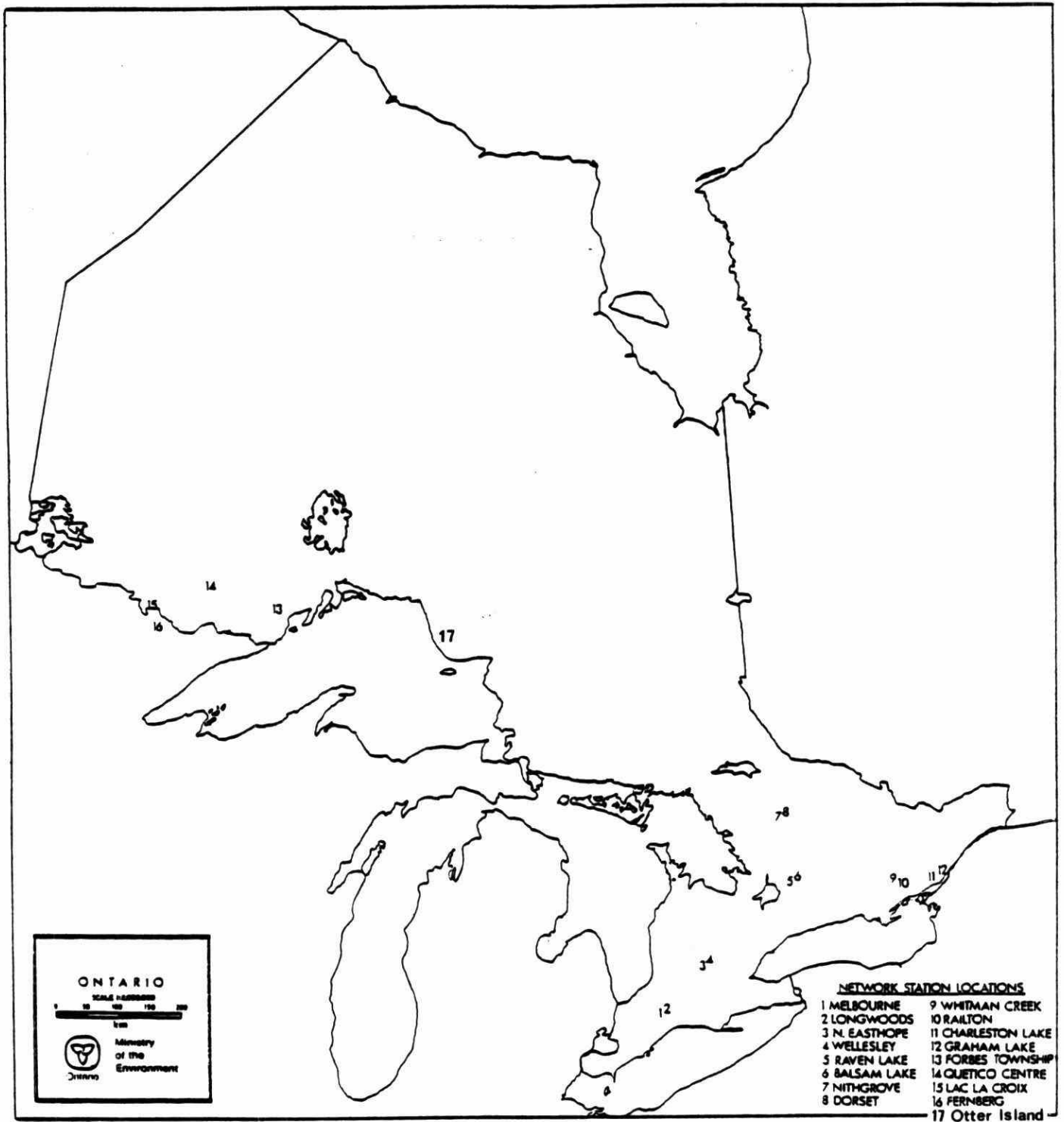
C - Poor calculated vs. observed conductance comparison	Y - Collected sample remained in sampler in excess of 24 hours with event(s) only occurred in the first 24 hours
J - $\Delta$ pH Large	Y2 - Sampling period equals to two days
H - Poor calculated vs. observed pH comparison	Y3 - Sampling period equals to three days
	Y4 - Sampling period equals to four days
M - Poor ionic balance	Y5 - Sampling period equals to five days
N - Abnormal sample collection efficiency	Z - Non-standard collection period with one or more events collected after 24 hours
T - Free $H^+$ exceeds total $H^+$	

**Result Remark Code Index**

>	- actual results greater than value reported
<	- actual result less than value reported
T	- actual result less than criterion of detection
W	- no response, minimum possible results reported
A	- approximate value
U	- unreliable result
G	- exceedance of Gross Limit Checks
D	- outlier of Dixon Ratio Test
B	- exceedance of Gross Limit Checks and Outlier of Dixon Ratio Tests

**PART II**

**STATION DESCRIPTION AND LOCATION MAP**



**APIOS DAILY PRECIPITATION AND AIR MONITORING NETWORK SITE LOCATIONS \***

AREA	MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM COORDINATES (Northing) (Easting)	
London	Southwestern	Longwoods Conservations Area*	239	42°53'02"	81°28'50"	4747600	460700
		Melbourne	213	42°47'15"	81°33'23"	4737100	454500
		North Easthope	375	43°24'21"	80°53'35"	4805650	508650
		Wellesley	344	43°28'13"	80°45'35"	4812700	519600
Dorset	Central	Dorset Laboratory*	320	45°13'23"	78°55'49"	5009600	662450
		Nithgrove	325	45°12'01"	79°04'14"	5006800	651600
		Balsam Lake Provincial Park	259	44°37'35"	78°51'22"	4943500	670170
		Raven Lake	274	44°36'40"	78°54'43"	4941550	665700
Kingston	Southeastern	Charleston Lake Provincial Park*	92	44°29'54"	76°02'30"	4927500	417150
		Graham Lake	130	44°35'22"	75°51'44"	4937450	431550
		Railton	156	44°22'34"	76°35'33"	4914700	373200
		Whitman Creek	137	44°29'07"	76°49'19"	4927200	355100
Thunder Bay	Northwestern	Fernberg*	506	47°56'51"	91°29'26"	5311000	612000
		Lac La Croix	368	48°21'14"	92°12'32"	5355900	558400
		Forbes Township	324	48°34'58"	89°38'56"	5384150	304800
		Otter Island	204	48 06'50"	86 04'25"	5328750	569500
		Quetico Centre	420	48°24'44"	91°12'08"	5399750	632100

\* All sites monitor precipitation concentrations. Sites labelled (\*) also monitor air concentrations.



**PART III**

**SOUTHWESTERN REGION**

**DAILY PRECIPITATION CHEMISTRY LISTINGS**

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGHOODS/DAILY/AEROCHEM

#02

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 6,84	JAN 5,84	800 800	**** ****	2	4.5	2	17819	2	1	U 5	I
JAN 7,84	JAN 6,84	800 900	**** ****	2	1.4	2	17821	2	1	42	CD N
JAN 8,84	JAN 7,84	900 800	**** ****	2	3.2	2	17823	2	1	****	EIK
JAN 10,84	JAN 9,84	800 1215	**** ****	2	6.6	2	17825	2	1	****	EIK
JAN 14,84	JAN 13,84	800 830	**** ****	2	3.8	2	17827	2	1	****	EIK
JAN 17,84	JAN 16,84	900 1000	**** ****	2	0.8	2	17831	2	1	****	EIK
JAN 24,84	JAN 23,84	800 1000	**** ****	3	9.7	2	17833	2	1	81	
JAN 26,84	JAN 25,84	900 1000	**** ****	2	1.8	2	17835	2	1	****	IE
JAN 27,84	JAN 26,84	1000 900	**** ****	3	3.2	2	17837	2	1	9	N
FEB 2,84	FEB 1,84	900 900	**** ****	2	3.0	2	17841	2	1	U 3	CI
FEB 3,84	FEB 2,84	900 1000	**** ****	1	2.2	2	17843	2	1	97	
FEB 4,84	FEB 3,84	1000 900	**** ****	3	2.0	2	17845	2	1	30	N
FEB 6,84	FEB 5,84	900 900	**** ****	2	3.0	2	17847	2	1	****	I
FEB 7,84	FEB 6,84	900 900	**** ****	2	4.0	2	17849	2	1	****	I
FEB 11,84	FEB 10,84	900 900	1600 100	1	4.4	2	17851	2	1	102	
FEB 13,84	FEB 12,84	900 900	630 900	1	0.6	2	17853	2	1	150	CD N
FEB 14,84	FEB 13,84	900 1000	**** ****	1	32.6	2	17855	2	1	97	
FEB 20,84	FEB 19,84	900 900	**** ****	1	1.1	2	17861	2	1	120	N
MAR 5,84	MAR 4,84	800 800	**** ****	3	12.5	2	17864	2	1	65	
MAR 15,84	MAR 14,84	930 1300	**** ****	1	1.0	2	17870	2	1	131	C N
MAR 16,84	MAR 15,84	1300 1000	2400 930	1	37.0	2	17866	2	1	100	C
MAR 21,84	MAR 20,84	900 930	2000 900	1	16.0	2	17872	2	1	99	C
MAR 22,84	MAR 21,84	930 900	1130 900	3	8.0	2	17876	2	1	38	N
MAR 23,84	MAR 22,84	900 930	**** ****	1	2.2	2	17878	2	1	18	CD N
MAR 29,84	MAR 28,84	830 900	**** ****	3	2.6	2	17880	2	1	****	EIK
MAR 30,84	MAR 29,84	900 1000	**** ****	1	1.5	2	17882	2	1	102	D
APR 4,84	APR 3,84	900 900	300 900	1	2.8	2	17884	2	1	104	C
APR 5,84	APR 4,84	900 800	1900 100	1	6.0	2	17886	2	1	107	
APR 6,84	APR 5,84	800 900	**** ****	1	0.2	2	17888	2	1	78	Q
APR 7,84	APR 6,84	900 900	**** ****	1	0.2	2	17890	2	1	218	C N
APR 12,84	APR 11,84	830 1000	2300 430	1	****	2	17892	2	1	****	E
APR 15,84	APR 14,84	800 700	1530 1600	1	1.9	2	17894	2	1	159	C N
APR 16,84	APR 15,84	700 930	100 930	1	11.8	2	17896	2	1	52	
APR 17,84	APR 16,84	930 1200	**** ****	3	5.2	2	17900	2	1	112	
APR 18,84	APR 17,84	1200 1000	1230 2230	1	2.4	2	17902	2	1	96	
APR 20,84	APR 19,84	800 800	1800 200	1	7.0	2	17904	2	1	104	C
APR 23,84	APR 22,84	900 900	**** ****	1	3.0	2	17906	2	1	127	D N
APR 24,84	APR 23,84	900 800	1200 800	1	11.8	1	17908	2	1	58	C
APR 25,84	APR 24,84	800 900	800 1000	1	2.0	1	17910	2	1	56	C
MAY 8,84	MAY 7,84	800 800	**** ****	1	6.2	1	17912	2	1	93	CD H

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

#02

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 6,84	JAN 5,84	16.0	*****	*****	4.29	*****	*****	*****
JAN 7,84	JAN 6,84	38.0	*****	*****	4.97	0.0550	5.20	1.29
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	509.0	29.2	*****	4.29	0.0828	1.85	0.58
JAN 26,84	JAN 25,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	20.0	*****	*****	4.13	0.1310	*****	*****
FEB 2,84	FEB 1,84	6.0	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	138.0	39.8	*****	4.17	0.1026	2.45	1.08
FEB 4,84	FEB 3,84	39.0	55.5	*****	4.00	0.1390	4.15	1.15
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 7,84	FEB 6,84	*****	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	289.0	38.5	3.90	4.10	0.1102	3.20	0.77
FEB 13,84	FEB 12,84	58.0	*****	*****	4.45	0.0646	2.85	0.47
FEB 14,84	FEB 13,84	2043.0	19.8	4.18	4.35	0.0640	1.55	0.31
FEB 20,84	FEB 19,84	85.0	*****	*****	4.23	0.0844	1.85	0.94
MAR 5,84	MAR 4,84	525.0	28.3	3.98	4.20	0.0844	2.50	0.35
MAR 15,84	MAR 14,84	84.0	*****	*****	3.89	G 0.3720	G 23.00	G 2.30
MAR 16,84	MAR 15,84	2376.0	27.6	4.24	4.24	0.0818	2.25	0.34
MAR 21,84	MAR 20,84	1017.0	72.5	3.82	3.82	0.1940	5.60	1.12
MAR 22,84	MAR 21,84	198.0	49.5	3.97	3.95	0.1340	3.40	0.88
MAR 23,84	MAR 22,84	26.0	*****	*****	3.71	B 0.2480	G 9.00	1.79
MAR 29,84	MAR 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 30,84	MAR 29,84	99.0	10.0	*****	G 6.64	D 0.0212	D 1.35	0.25
APR 4,84	APR 3,84	188.0	56.7	3.93	3.99	0.1352	4.45	1.16
APR 5,84	APR 4,84	414.0	18.5	4.47	4.57	0.0490	1.30	0.47
APR 6,84	APR 5,84	10.0	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	28.0	*****	*****	4.51	0.0588	*****	*****
APR 12,84	APR 11,84	9.0	*****	*****	*****	*****	*****	*****
APR 15,84	APR 14,84	194.0	G 86.0	3.86	3.93	0.1858	B 8.80	B 2.35
APR 16,84	APR 15,84	400.0	59.0	3.89	3.94	0.1552	5.25	0.79
APR 17,84	APR 16,84	374.0	15.1	4.67	4.85	0.0424	2.05	0.25
APR 18,84	APR 17,84	148.0	35.3	*****	4.19	0.0980	2.45	0.62
APR 20,84	APR 19,84	470.0	G 86.3	3.77	3.81	0.2140	6.80	1.62
APR 23,84	APR 22,84	245.0	22.5	4.38	4.53	D 0.0566	2.15	0.44
APR 24,84	APR 23,84	440.0	46.5	4.03	4.03	0.1272	3.40	0.71
APR 25,84	APR 24,84	73.0	*****	*****	3.53	G 0.3540	G 15.45	G 2.54
MAY 8,84	MAY 7,84	371.0	36.1	4.76	4.85	0.0512	6.80	1.00

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

#02

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 6,84	JAN 5,84	*****	*****	*****	*****	*****	*****	0.0513
JAN 7,84	JAN 6,84	*****	0.52	*****	*****	*****	*****	0.0107
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	0.08	0.16	0.015	<T 0.015	0.045	0.184	0.0513
JAN 26,84	JAN 25,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	0.0741
FEB 2,84	FEB 1,84	*****	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	0.29	0.21	0.035	0.050	0.095	0.520	0.0676
FEB 4,84	FEB 3,84	*****	0.51	*****	*****	*****	*****	0.1000
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 7,84	FEB 6,84	*****	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	0.22	0.50	0.020	B 0.400	0.300	0.344	0.0794
FEB 13,84	FEB 12,84	*****	0.58	*****	*****	*****	0.120	0.0355
FEB 14,84	FEB 13,84	0.04	0.09	0.010	<T 0.005	0.050	0.130	0.0447
FEB 20,84	FEB 19,84	0.33	0.21	0.045	0.125	0.110	0.380	0.0589
MAR 5,84	MAR 4,84	0.13	0.09	0.015	<T 0.005	0.040	0.132	0.0631
MAR 15,84	MAR 14,84	*****	G 1.55	*****	*****	*****	0.950	0.1288
MAR 16,84	MAR 15,84	0.11	0.11	0.020	<T 0.010	0.025	0.160	0.0575
MAR 21,84	MAR 20,84	0.34	0.42	0.070	0.040	0.150	0.550	0.1514
MAR 22,84	MAR 21,84	0.09	0.14	0.020	<T 0.010	0.035	0.200	0.1122
MAR 23,84	MAR 22,84	*****	0.67	*****	*****	*****	*****	0.1950
MAR 29,84	MAR 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 30,84	MAR 29,84	0.66	0.19	0.130	0.035	0.125	0.392	G 0.0002
APR 4,84	APR 3,84	0.39	0.20	0.080	0.025	0.050	0.650	0.1023
APR 5,84	APR 4,84	0.28	0.07	0.040	<T 0.015	0.030	0.128	0.0269
APR 6,84	APR 5,84	*****	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	*****	*****	*****	*****	*****	*****	0.0309
APR 12,84	APR 11,84	*****	*****	*****	*****	*****	*****	*****
APR 15,84	APR 14,84	1.02	0.74	G 0.215	0.100	0.125	B 2.550	0.1175
APR 16,84	APR 15,84	0.12	0.15	0.020	0.030	<T 0.005	0.465	0.1148
APR 17,84	APR 16,84	0.18	0.05	D 0.045	<T 0.010	<T 0.010	0.460	0.0141
APR 18,84	APR 17,84	0.09	0.15	0.015	0.050	0.100	0.215	0.0646
APR 20,84	APR 19,84	0.32	0.34	0.055	0.120	0.100	0.970	0.1549
APR 23,84	APR 22,84	0.32	0.12	0.080	D 0.210	0.085	0.235	0.0295
APR 24,84	APR 23,84	0.08	0.13	0.015	<T 0.005	0.030	0.310	0.0933
APR 25,84	APR 24,84	*****	0.44	*****	*****	*****	G 1.550	0.2951
MAY 8,84	MAY 7,84	1.89	0.70	0.350	G 0.300	0.360	1.150	0.0141

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

#02

PAGE : 4

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
MAY 9,84	MAY 8,84	800 1200	800 1500	1	3.0	1	17914	2	1	78	C
MAY 10,84	MAY 9,84	1200 900	****	1	0.4	1	17916	2	1	****	K
MAY 14,84	MAY 13,84	800 1000	900 2200	1	25.0	1	17918	2	1	72	
MAY 15,84	MAY 14,84	1000 1145	1900 2000	1	0.2	1	17922	2	1	101	C
MAY 18,84	MAY 17,84	800 800	400 700	1	7.2	1	17924	2	1	94	C
MAY 19,84	MAY 18,84	800 1000	****	1	1.0	1	17926	2	1	71	C
MAY 21,84	MAY 20,84	800 900	****	1	1.1	1	17928	2	1	42	C N
MAY 22,84	MAY 21,84	900 1200	****	1	1.0	1	17930	2	1	82	C
MAY 23,84	MAY 22,84	1200 1000	2300 900	1	14.6	1	17932	2	1	101	
MAY 26,84	MAY 25,84	800 1000	2300 400	1	27.5	1	17934	2	1	104	
MAY 28,84	MAY 27,84	800 800	400 700	1	0.8	1	17936	2	1	54	D
MAY 29,84	MAY 28,84	800 1100	1600 900	1	15.8	1	17938	2	1	48	N
JUN 3,84	JUN 2,84	800 830	****	1	5.8	1	17942	2	1	97	CD
JUN 6,84	JUN 5,84	800 1150	1130 1215	1	1.2	1	17944	2	1	97	BC
JUN 7,84	JUN 6,84	1150 900	1700 1830	1	12.6	1	17946	2	1	107	C
JUN 11,84	JUN 10,84	800 900	1730 1800	1	3.0	1	17948	2	1	101	Q H
JUN 14,84	JUN 13,84	1700 1030	1900 2400	1	1.8	1	17950	2	1	59	C
JUN 17,84	JUN 16,84	800 1000	700 1000	1	51.0	1	17952	2	1	105	J
JUN 18,84	JUN 17,84	1000 800	****	1	37.0	1	17954	2	1	90	J
JUN 19,84	JUN 18,84	800 1100	1300 1430	1	6.2	1	17956	2	1	104	
JUN 24,84	JUN 23,84	800 900	2330 200	1	7.4	1	17958	2	1	102	
JUN 28,84	JUN 27,84	800 1500	930 1430	1	13.6	1	17960	2	1	94	
JUL 5,84	JUL 4,84	800 1200	1700 1930	1	9.0	1	17962	2	1	97	C
JUL 6,84	JUL 5,84	1200 730	1800 1900	1	1.6	1	17964	2	1	94	
JUL 7,84	JUL 6,84	730 1000	800 1100	1	26.9	1	17966	2	1	24	N
JUL 10,84	JUL 9,84	800 1100	2400 900	1	9.0	1	17968	2	1	98	
JUL 12,84	JUL 11,84	745 1430	830 1500	1	2.6	1	17970	2	1	68	
JUL 16,84	JUL 15,84	800 900	1600 1730	1	1.8	1	17972	2	1	87	
JUL 18,84	JUL 17,84	800 830	1400 2200	1	6.6	1	17974	2	1	90	
JUL 24,84	JUL 23,84	800 1500	2130 2300	1	2.2	1	17976	2	1	87	C
AUG 2,84	AUG 1,84	800 1030	****	1	8.6	1	17978	2	1	66	
AUG 3,84	AUG 2,84	1030 900	1445 1700	1	10.4	1	17980	2	1	93	
AUG 7,84	AUG 6,84	800 1100	2100 2400	1	2.4	1	17982	2	1	78	
AUG 9,84	AUG 8,84	800 1100	2100 2400	1	6.6	1	17984	2	1	95	
AUG 14,84	AUG 13,84	800 1100	****	1	1.0	1	17986	2	1	****	K
AUG 19,84	AUG 18,84	800 900	500 700	1	9.0	1	17988	2	1	****	F
AUG 29,84	AUG 28,84	800 800	30 230	1	32.4	1	17990	2	1	91	
AUG 30,84	AUG 29,84	1600 1600	745 1000	1	23.2	1	17992	2	1	30	C
SEP 2,84	SEP 1,84	800 900	145 245	1	4.8	1	17994	2	1	93	BC
SEP 3,84	SEP 2,84	900 900	1 ****	1	14.4	1	17996	2	1	96	CD

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

#02

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAY 9,84	MAY 8,84	151.0	40.0	*****	4.44	0.0764	6.10	0.85
MAY 10,84	MAY 9,84	*****	*****	*****	*****	*****	*****	*****
MAY 14,84	MAY 13,84	1167.0	10.5	4.77	4.92	0.0334	1.10	0.17
MAY 15,84	MAY 14,84	13.0	*****	*****	G 7.27	0.0254	*****	*****
MAY 18,84	MAY 17,84	438.0	45.0	4.23	4.43	0.0792	7.45	1.16
MAY 19,84	MAY 18,84	46.0	*****	*****	4.03	0.1560	> 10.00	> 2.00
MAY 21,84	MAY 20,84	30.0	*****	*****	G 7.43	0.0190	1.35	0.58
MAY 22,84	MAY 21,84	53.0	*****	*****	3.69	0.2520	11.50	1.62
MAY 23,84	MAY 22,84	953.0	11.1	4.64	4.77	0.0398	1.05	0.20
MAY 26,84	MAY 25,84	1845.0	D 24.3	4.29	4.36	0.0672	2.65	0.34
MAY 28,84	MAY 27,84	28.0	*****	*****	4.40	0.0772	*****	*****
MAY 29,84	MAY 28,84	492.0	18.1	4.40	4.57	0.0464	2.45	0.21
JUN 3,84	JUN 2,84	362.0	56.2	3.94	4.08	D 0.1240	6.85	1.13
JUN 6,84	JUN 5,84	75.0	*****	*****	3.52	G 0.3620	G 17.80	1.97
JUN 7,84	JUN 6,84	867.0	40.5	4.08	4.27	0.0864	4.70	1.01
JUN 11,84	JUN 10,84	196.0	26.9	4.69	G 5.09	0.0364	4.85	0.62
JUN 14,84	JUN 13,84	69.0	*****	*****	4.03	0.1470	G 14.00	1.51
JUN 17,84	JUN 16,84	3443.0	49.9	3.41	4.03	0.1262	5.05	0.44
JUN 18,84	JUN 17,84	2149.0	42.5	3.68	4.06	0.1088	4.35	0.46
JUN 19,84	JUN 18,84	415.0	44.5	3.78	4.06	0.1138	4.35	0.65
JUN 24,84	JUN 23,84	488.0	39.8	4.00	4.08	0.1090	4.75	0.53
JUN 28,84	JUN 27,84	822.0	34.4	4.20	4.29	0.0776	4.25	0.60
JUL 5,84	JUL 4,84	560.0	51.8	3.97	4.07	0.1154	6.50	0.95
JUL 6,84	JUL 5,84	97.0	49.3	*****	4.08	0.1140	6.35	0.94
JUL 7,84	JUL 6,84	429.0	17.6	4.39	4.54	0.0530	1.80	0.29
JUL 10,84	JUL 9,84	570.0	32.2	4.08	4.26	0.0824	3.45	0.63
JUL 12,84	JUL 11,84	114.0	34.8	*****	4.15	0.0866	3.95	0.45
JUL 16,84	JUL 15,84	101.0	D 65.9	*****	3.90	0.1498	8.50	0.86
JUL 18,84	JUL 17,84	381.0	28.3	4.23	4.36	0.0596	3.20	0.65
JUL 24,84	JUL 23,84	123.0	55.2	*****	4.19	0.0952	6.85	1.59
AUG 2,84	AUG 1,84	365.0	*****	*****	*****	*****	*****	*****
AUG 3,84	AUG 2,84	624.0	71.2	3.81	3.82	0.1714	6.95	0.91
AUG 7,84	AUG 6,84	120.0	52.2	*****	3.97	0.1264	5.05	0.71
AUG 9,84	AUG 8,84	406.0	41.6	4.03	4.09	0.1104	3.30	0.70
AUG 14,84	AUG 13,84	*****	*****	*****	*****	*****	*****	*****
AUG 19,84	AUG 18,84	*****	*****	*****	*****	*****	*****	*****
AUG 29,84	AUG 28,84	1899.0	40.1	4.09	4.18	0.0934	4.50	0.53
AUG 30,84	AUG 29,84	452.0	42.9	4.14	4.22	0.0898	5.50	0.69
SEP 2,84	SEP 1,84	287.0	75.5	3.91	4.00	0.1402	9.70	D 1.58
SEP 3,84	SEP 2,84	894.0	32.0	4.25	D 4.32	0.0732	4.25	0.39

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : LONGWOODS/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
MAY 9,84	MAY 8,84	0.68	0.28	0.150	0.050	0.050	1.500	0.0363
MAY 10,84	MAY 9,84	*****	*****	*****	*****	*****	*****	*****
MAY 14,84	MAY 13,84	0.10	0.03	0.010	<T 0.005	<T 0.010	0.245	0.0120
MAY 15,84	MAY 14,84	*****	*****	*****	*****	*****	*****	G 0.0001
MAY 18,84	MAY 17,84	1.92	0.32	G 0.395	0.085	0.055	1.250	0.0372
MAY 19,84	MAY 18,84	*****	0.63	*****	*****	*****	*****	0.0933
MAY 21,84	MAY 20,84	*****	0.33	*****	*****	*****	*****	G 0.0000
MAY 22,84	MAY 21,84	*****	0.62	*****	*****	*****	*****	0.2042
MAY 23,84	MAY 22,84	0.09	0.06	0.020	0.020	<T 0.010	0.165	0.0170
MAY 26,84	MAY 25,84	0.15	0.09	0.030	0.025	<T 0.010	0.355	0.0437
MAY 28,84	MAY 27,84	*****	*****	*****	*****	*****	*****	0.0398
MAY 29,84	MAY 28,84	0.44	0.07	0.080	0.020	<T 0.005	0.155	0.0269
JUN 3,84	JUN 2,84	1.10	0.39	0.190	0.125	0.060	1.000	0.0832
JUN 6,84	JUN 5,84	*****	0.44	*****	*****	*****	0.900	0.3020
JUN 7,84	JUN 6,84	1.06	0.32	0.210	0.070	0.155	0.515	0.0537
JUN 11,84	JUN 10,84	1.15	0.30	0.240	0.115	0.110	0.720	G 0.0081
JUN 14,84	JUN 13,84	*****	G 1.08	*****	*****	*****	1.300	0.0933
JUN 17,84	JUN 16,84	0.07	0.12	0.015	0.055	0.025	0.375	0.0933
JUN 18,84	JUN 17,84	0.10	0.20	0.025	0.095	0.040	0.400	0.0871
JUN 19,84	JUN 18,84	0.24	0.16	0.030	0.040	0.030	0.515	0.0871
JUN 24,84	JUN 23,84	*****	0.09	*****	*****	*****	*****	0.0832
JUN 28,84	JUN 27,84	0.45	0.12	0.090	0.065	<T 0.010	0.705	0.0513
JUL 5,84	JUL 4,84	1.13	0.22	0.215	0.035	0.015	0.790	0.0851
JUL 6,84	JUL 5,84	0.93	0.27	0.190	0.055	0.030	1.000	0.0832
JUL 7,84	JUL 6,84	0.03	0.05	0.010	0.015	0.005	0.295	0.0288
JUL 10,84	JUL 9,84	0.43	0.13	0.065	0.045	0.070	0.525	0.0550
JUL 12,84	JUL 11,84	0.30	0.17	0.065	0.045	0.070	0.355	0.0708
JUL 16,84	JUL 15,84	0.90	0.18	0.215	0.065	0.025	0.600	0.1259
JUL 18,84	JUL 17,84	0.59	0.13	0.145	0.040	0.020	0.430	0.0437
JUL 24,84	JUL 23,84	G 2.01	0.39	G 0.355	0.150	0.115	1.000	0.0646
AUG 2,84	AUG 1,84	*****	*****	*****	*****	*****	*****	*****
AUG 3,84	AUG 2,84	0.34	0.21	0.070	0.035	0.035	0.535	0.1514
AUG 7,84	AUG 6,84	0.40	0.18	0.075	0.030	<T 0.005	0.335	0.1072
AUG 9,84	AUG 8,84	0.38	0.14	0.060	0.025	0.015	0.150	0.0813
AUG 14,84	AUG 13,84	*****	*****	*****	*****	*****	*****	*****
AUG 19,84	AUG 18,84	*****	*****	*****	*****	*****	*****	*****
AUG 29,84	AUG 28,84	0.22	0.11	0.045	<W 0.005	0.015	0.590	0.0661
AUG 30,84	AUG 29,84	0.49	0.16	0.095	0.060	0.120	0.915	0.0603
SEP 2,84	SEP 1,84	B 2.16	0.48	D 0.310	G 0.280	0.365	0.860	0.1000
SEP 3,84	SEP 2,84	0.35	0.15	0.080	0.050	0.050	0.570	D 0.0479



ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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#02

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
SEP 10,84	SEP 9,84	800 900	1600 300	1	****	*	17998	2	1	****	
SEP 11,84	SEP 10,84	900 800	2300 2355	1	18.0	1	64002	2	1	97	
SEP 13,84	SEP 12,84	800 1800	800 900	1	20.4	1	64004	2	1	96	H
SEP 15,84	SEP 13,84	1800 900	2300 500	1	2.4	1	64006	2	1	90	Z
SEP 24,84	SEP 23,84	800 930	**** ****	1	3.0	1	64008	2	1	69	
SEP 26,84	SEP 25,84	800 900	1830 2300	1	41.8	1	64010	2	1	102	
OCT 8,84	OCT 7,84	800 900	2300 ****	1	9.2	1	64013	2	1	101	
OCT 10,84	OCT 9,84	800 1100	800 1100	1	1.0	1	64015	2	1	90	
OCT 15,84	OCT 14,84	800 800	**** ****	1	1.6	1	64017	2	1	60	
OCT 16,84	OCT 15,84	800 800	2300 ****	1	1.0	1	64019	2	1	71	
OCT 18,84	OCT 17,84	800 800	1500 1700	1	1.8	1	64021	2	1	71	
OCT 19,84	OCT 18,84	900 900	600 900	1	9.6	1	64023	2	1	101	M
OCT 21,84	OCT 20,84	800 800	300 800	1	4.1	1	64025	2	1	105	
OCT 22,84	OCT 21,84	800 900	1200 1400	1	0.8	1	64027	2	1	74	
OCT 26,84	OCT 25,84	800 900	1600 900	1	4.8	1	64029	2	1	92	
NOV 2,84	NOV 1,84	800 900	1330 2100	1	9.2	1	64031	2	1	82	
NOV 5,84	NOV 4,84	800 900	800 1400	1	23.0	1	64033	2	1	97	
NOV 6,84	NOV 5,84	900 1200	1400 1600	1	2.2	1	64037	2	1	91	
NOV 11,84	NOV 9,84	800 1600	**** ****	1	28.5	1	64039	2	1	89	Z
NOV 12,84	NOV 11,84	1600 800	600 800	2	****	1	64041	2	1	****	
NOV 16,84	NOV 15,84	800 800	815 1430	3	7.8	1	64043	2	1	93	
NOV 29,84	NOV 28,84	700 900	730 1520	1	10.2	2	64045	2	1	96	
DEC 1,84	NOV 30,84	800 900	2000 2200	1	1.4	2	64047	2	1	85	
DEC 3,84	DEC 2,84	900 830	300 530	1	8.2	2	64049	2	1	101	
DEC 6,84	DEC 5,84	800 800	2100 200	2	4.4	2	64051	2	1	60	
DEC 10,84	DEC 9,84	800 900	600 900	1	6.0	2	64052	2	1	109	
DEC 13,84	DEC 12,84	800 1000	**** ****	1	4.2	2	64053	2	1	93	
DEC 19,84	DEC 18,84	800 930	600 930	2	6.6	2	64054	2	1	73	
DEC 22,84	DEC 21,84	800 900	1900 2400	1	23.4	2	64055	2	1	101	
DEC 25,84	DEC 24,84	900 900	2000 100	2	3.2	2	64057	2	1	78	M
DEC 27,84	DEC 26,84	900 900	1900 200	2	5.8	2	64059	2	1	35	N
DEC 28,84	DEC 27,84	900 800	**** 800	1	5.4	2	64061	2	1	92	
DEC 29,84	DEC 28,84	800 1800	1100 1700	1	15.8	2	64063	2	1	114	



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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
SEP 10,84	SEP 9,84	935.0	32.6	4.13	4.24	0.0834	3.30	0.33
SEP 11,84	SEP 10,84	1130.0	62.7	3.89	3.95	0.1426	5.45	0.99
SEP 13,84	SEP 12,84	1262.0	26.1	*****	4.50	0.0610	3.75	0.49
SEP 15,84	SEP 13,84	139.0	19.0	*****	4.61	0.0488	2.75	0.24
SEP 24,84	SEP 23,84	134.0	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	2748.0	15.0	*****	*****	0.0440	1.55	0.18
OCT 8,84	OCT 7,84	600.0	48.6	*****	4.06	0.1152	4.70	0.62
OCT 10,84	OCT 9,84	58.0	*****	*****	3.65	G 0.3340	G 18.20	0.00
OCT 15,84	OCT 14,84	62.0	*****	*****	3.74	0.2660	G 15.10	2.20
OCT 16,84	OCT 15,84	46.0	*****	*****	3.61	G 0.3180	G 15.60	1.66
OCT 18,84	OCT 17,84	83.0	*****	*****	3.79	0.2200	10.10	1.64
OCT 19,84	OCT 18,84	622.0	32.5	*****	4.26	0.0832	3.00	0.35
OCT 21,84	OCT 20,84	278.0	58.5	*****	3.91	0.1418	5.60	0.69
OCT 22,84	OCT 21,84	38.0	*****	*****	G 5.64	0.0332	4.55	0.57
OCT 26,84	OCT 25,84	285.0	50.4	*****	4.07	0.1182	4.25	1.01
NOV 2,84	NOV 1,84	489.0	25.1	*****	4.40	0.0628	2.60	0.43
NOV 5,84	NOV 4,84	1442.0	20.3	*****	4.41	0.0594	1.95	0.16
NOV 6,84	NOV 5,84	129.0	17.0	*****	4.79	0.0420	2.15	0.41
NOV 11,84	NOV 9,84	1637.0	49.2	*****	4.06	0.1184	3.55	0.93
NOV 12,84	NOV 11,84	152.0	15.9	*****	4.56	0.0476	1.55	0.19
NOV 16,84	NOV 15,84	469.0	D 32.2	*****	4.23	0.0856	2.95	0.45
NOV 29,84	NOV 28,84	631.0	28.4	*****	4.27	0.0758	2.10	D 0.47
DEC 1,84	NOV 30,84	77.0	68.0	*****	3.98	0.1396	4.40	G 2.63
DEC 3,84	DEC 2,84	536.0	37.9	*****	4.13	0.1044	2.55	0.75
DEC 6,84	DEC 5,84	170.0	11.8	*****	4.72	0.0380	0.15	0.49
DEC 10,84	DEC 9,84	421.0	45.5	*****	4.02	0.1266	2.75	0.72
DEC 13,84	DEC 12,84	251.0	74.0	*****	3.87	0.1762	6.75	1.29
DEC 19,84	DEC 18,84	312.0	22.7	*****	4.35	0.0672	1.00	0.56
DEC 22,84	DEC 21,84	1524.0	15.4	*****	4.49	0.0512	1.20	0.14
DEC 25,84	DEC 24,84	161.0	6.2	*****	G 6.59	0.0168	0.50	0.22
DEC 27,84	DEC 26,84	131.0	6.8	*****	G 6.61	0.0160	0.45	0.26
DEC 28,84	DEC 27,84	319.0	44.5	*****	4.08	0.1124	3.65	0.73
DEC 29,84	DEC 28,84	1162.0	20.3	*****	4.54	0.0546	2.25	0.25

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ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
SEP 10,84	SEP 9,84	0.12	0.26	0.045	<T 0.005	0.160	0.200	0.0575
SEP 11,84	SEP 10,84	0.21	0.23	0.060	0.030	0.050	0.680	0.1122
SEP 13,84	SEP 12,84	0.67	0.24	0.065	0.050	0.195	0.275	0.0316
SEP 15,84	SEP 13,84	0.32	0.11	0.055	0.055	0.165	0.260	0.0245
SEP 24,84	SEP 23,84	*****	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	0.05	0.07	0.010	<T 0.005	0.045	0.185	*****
OCT 8,84	OCT 7,84	0.27	0.11	0.045	0.020	<T 0.010	0.430	0.0871
OCT 10,84	OCT 9,84	*****	G 0.91	*****	*****	*****	G 6.250	0.2239
OCT 15,84	OCT 14,84	*****	0.63	*****	*****	*****	G 2.450	0.1820
OCT 16,84	OCT 15,84	*****	0.65	*****	*****	*****	0.845	0.2455
OCT 18,84	OCT 17,84	D 0.80	0.63	0.140	0.135	0.260	1.400	0.1622
OCT 19,84	OCT 18,84	0.07	0.14	0.015	0.020	0.055	0.130	0.0550
OCT 21,84	OCT 20,84	0.34	0.42	0.060	0.050	0.185	0.430	0.1230
OCT 22,84	OCT 21,84	*****	0.19	*****	*****	*****	*****	G 0.0023
OCT 26,84	OCT 25,84	0.31	0.24	0.050	0.050	0.055	0.675	0.0851
NOV 2,84	NOV 1,84	0.31	0.17	0.055	0.030	0.020	0.275	0.0398
NOV 5,84	NOV 4,84	0.02	0.11	<W 0.005	<W 0.005	<W 0.005	0.115	0.0389
NOV 6,84	NOV 5,84	0.36	0.10	0.030	<T 0.010	<T 0.010	0.475	0.0162
NOV 11,84	NOV 9,84	0.26	0.38	0.040	0.055	0.180	0.465	0.0871
NOV 12,84	NOV 11,84	0.09	0.17	0.010	<W 0.005	0.075	0.100	0.0275
NOV 16,84	NOV 15,84	0.21	0.23	0.025	0.020	0.075	0.285	0.0589
NOV 29,84	NOV 28,84	0.10	0.21	0.025	<W 0.005	0.090	0.225	0.0537
DEC 1,84	NOV 30,84	B 1.93	0.63	G 0.310	0.115	0.155	1.050	0.1047
DEC 3,84	DEC 2,84	0.25	0.24	0.035	0.015	0.025	0.305	0.0741
DEC 6,84	DEC 5,84	0.25	0.05	0.035	D 0.020	<W 0.005	<W 0.005	0.0191
DEC 10,84	DEC 9,84	0.11	0.29	0.010	0.030	0.070	0.195	0.0955
DEC 13,84	DEC 12,84	0.57	0.52	0.080	0.040	0.215	1.150	0.1349
DEC 19,84	DEC 18,84	0.25	0.16	0.025	0.025	<W 0.005	0.130	0.0447
DEC 22,84	DEC 21,84	0.09	0.05	0.010	<T 0.010	<W 0.005	0.070	0.0324
DEC 25,84	DEC 24,84	0.74	0.06	0.140	<W 0.005	0.015	0.150	G 0.0003
DEC 27,84	DEC 26,84	0.77	0.24	0.140	0.025	0.115	0.020	G 0.0002
DEC 28,84	DEC 27,84	0.47	0.30	0.065	0.075	0.085	0.460	0.0832
DEC 29,84	DEC 28,84	0.06	0.31	0.035	0.045	0.215	0.365	0.0288

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 5,84	JAN 4,84	800 800	**** ****	3	3.6	2	18294	2	1	65	
JAN 6,84	JAN 5,84	800 800	**** ****	3	2.5	2	18295	2	1	65	
JAN 8,84	JAN 7,84	800 930	**** ****	2	2.8	2	18296	2	1	52	
JAN 10,84	JAN 9,84	800 800	**** ****	2	6.9	2	18297	2	1	14	C N
JAN 14,84	JAN 13,84	800 800	**** ****	2	4.3	2	18298	2	1	74	C
JAN 24,84	JAN 23,84	800 800	**** ****	3	9.5	2	18299	2	1	33	N
JAN 27,84	JAN 26,84	800 800	**** ****	2	2.9	2	18300	2	1	48	N
JAN 31,84	JAN 30,84	800 800	**** ****	2	5.4	2	61001	2	1	33	N
FEB 3,84	FEB 2,84	800 800	**** ****	3	1.6	2	61002	2	1	118	
FEB 7,84	FEB 4,84	800 1220	**** ****	2	1.6	2	61003	2	1	38	NZ
FEB 11,84	FEB 10,84	800 800	**** ****	1	3.9	2	61004	2	1	104	
FEB 13,84	FEB 12,84	800 800	**** ****	1	1.0	2	61005	2	1	53	D
FEB 14,84	FEB 13,84	800 800	800 700	1	33.0	2	61006	2	1	94	C
FEB 25,84	FEB 24,84	800 1000	**** ****	2	4.8	2	61007	2	1	91	J
MAR 5,84	MAR 4,84	800 800	**** ****	3	8.8	2	61009	2	1	92	C
MAR 6,84	MAR 5,84	800 800	800 1200	2	3.5	2	61010	2	1	120	CD N
MAR 16,84	MAR 15,84	800 1000	**** ****	1	17.0	2	61011	2	1	163	NHCH
MAR 21,84	MAR 20,84	800 800	**** ****	1	16.8	2	61014	2	1	91	C
MAR 22,84	MAR 21,84	800 800	**** ****	3	6.0	2	61015	2	1	67	
MAR 23,84	MAR 22,84	800 800	**** ****	2	2.3	2	61016	2	1	35	C N
MAR 29,84	MAR 28,84	800 800	**** ****	3	3.1	2	61017	2	1	****	EIK
APR 4,84	APR 3,84	800 800	**** ****	1	2.8	2	61018	2	1	17	CD N
APR 5,84	APR 4,84	800 800	**** ****	1	5.8	2	61019	2	1	83	C M
APR 16,84	APR 15,84	800 800	**** ****	1	10.1	2	61020	2	1	116	
APR 17,84	APR 16,84	800 800	**** ****	1	3.4	2	61021	2	1	83	
APR 18,84	APR 17,84	800 800	**** ****	1	4.2	2	61022	2	1	93	
APR 20,84	APR 19,84	800 800	**** ****	1	7.6	1	61023	2	1	98	C
APR 23,84	APR 22,84	800 800	**** ****	1	4.2	1	61024	2	1	115	C JHM
APR 24,84	APR 23,84	800 800	**** ****	1	10.5	1	61025	2	1	88	
MAY 8,84	MAY 7,84	800 800	**** ****	1	4.5	1	61026	2	1	116	CD
MAY 9,84	MAY 8,84	800 800	**** ****	1	3.7	1	61027	2	1	79	
MAY 10,84	MAY 9,84	800 1000	1400 1500	1	0.7	1	61028	2	1	44	CD N
MAY 14,84	MAY 13,84	800 900	900 1700	1	20.5	1	61029	2	1	94	
MAY 15,84	MAY 14,84	900 800	**** ****	1	1.0	1	61030	2	1	70	C
MAY 18,84	MAY 17,84	800 800	**** ****	1	8.7	1	61031	2	1	95	CD
MAY 21,84	MAY 20,84	800 1000	2400 600	1	1.8	1	61032	2	1	91	C
MAY 22,84	MAY 21,84	1000 1730	**** ****	1	0.3	1	61033	2	1	98	C
MAY 23,84	MAY 22,84	1730 800	**** ****	1	16.2	1	61034	2	1	99	
MAY 24,84	MAY 23,84	800 800	**** ****	1	1.9	1	61035	2	1	62	BCD
MAY 26,84	MAY 25,84	800 900	**** ****	1	23.6	1	61036	2	1	102	C

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 5,84	JAN 4,84	150.0	16.0	*****	4.56	0.0516	1.00	0.26
JAN 6,84	JAN 5,84	105.0	28.5	*****	4.28	0.0788	1.55	0.69
JAN 8,84	JAN 7,84	95.0	*****	*****	4.24	0.0870	1.75	1.02
JAN 10,84	JAN 9,84	64.0	*****	*****	4.60	0.0392	0.55	0.34
JAN 14,84	JAN 13,84	205.0	43.8	*****	4.01	0.1158	1.35	1.15
JAN 24,84	JAN 23,84	201.0	*****	*****	4.09	0.1050	*****	*****
JAN 27,84	JAN 26,84	90.0	*****	*****	3.76	0.2300	7.30	G 3.10
JAN 31,84	JAN 30,84	115.0	32.0	*****	4.20	0.0884	0.95	0.87
FEB 3,84	FEB 2,84	122.0	39.0	*****	4.17	0.0976	2.20	1.08
FEB 7,84	FEB 4,84	40.0	50.0	*****	4.01	0.1406	3.80	1.10
FEB 11,84	FEB 10,84	262.0	39.5	3.88	4.06	0.1118	3.15	0.69
FEB 13,84	FEB 12,84	34.0	27.8	*****	4.40	0.0748	3.55	0.49
FEB 14,84	FEB 13,84	2007.0	20.5	4.19	4.37	0.0666	1.45	0.31
FEB 25,84	FEB 24,84	281.0	11.2	4.12	4.67	0.0402	0.45	0.32
MAR 5,84	MAR 4,84	520.0	31.9	3.95	4.19	0.0780	2.75	0.64
MAR 6,84	MAR 5,84	271.0	20.1	4.16	4.36	0.0710	1.65	0.25
MAR 16,84	MAR 15,84	1778.0	30.7	4.17	4.39	0.0832	2.65	0.40
MAR 21,84	MAR 20,84	990.0	75.5	3.79	3.88	0.1944	6.40	1.18
MAR 22,84	MAR 21,84	259.0	40.0	4.06	4.12	0.1106	2.70	0.70
MAR 23,84	MAR 22,84	53.0	*****	*****	4.12	0.1114	2.20	0.79
MAR 29,84	MAR 28,84	*****	*****	*****	*****	*****	*****	*****
APR 4,84	APR 3,84	32.0	*****	*****	G 5.16	0.0418	*****	*****
APR 5,84	APR 4,84	309.0	20.0	4.41	4.54	0.0540	1.50	0.49
APR 16,84	APR 15,84	754.0	55.5	3.96	3.97	0.1426	4.70	1.02
APR 17,84	APR 16,84	182.0	25.5	4.34	4.44	0.0664	3.05	0.39
APR 18,84	APR 17,84	253.0	18.8	4.53	4.57	0.0534	1.85	0.36
APR 20,84	APR 19,84	480.0	73.0	3.81	3.81	0.1898	4.55	1.52
APR 23,84	APR 22,84	310.0	9.7	B 6.16	B 7.76	0.0162	1.80	0.27
APR 24,84	APR 23,84	597.0	48.0	3.99	3.99	0.1310	3.75	0.73
MAY 8,84	MAY 7,84	337.0	47.1	4.38	4.46	0.0832	7.95	1.09
MAY 9,84	MAY 8,84	189.0	24.6	4.50	4.59	0.0550	3.40	0.50
MAY 10,84	MAY 9,84	20.0	*****	*****	G 7.07	0.0274	*****	*****
MAY 14,84	MAY 13,84	1242.0	15.0	G 4.82	4.79	0.0402	1.55	0.27
MAY 15,84	MAY 14,84	45.0	*****	*****	G 7.32	0.0244	3.45	0.59
MAY 18,84	MAY 17,84	530.0	49.8	*****	4.29	0.0864	7.55	1.25
MAY 21,84	MAY 20,84	105.0	41.5	*****	G 6.84	0.0264	8.25	1.26
MAY 22,84	MAY 21,84	19.0	*****	*****	3.60	G 0.3140	*****	*****
MAY 23,84	MAY 22,84	1029.0	12.3	4.69	4.78	0.0360	1.35	0.33
MAY 24,84	MAY 23,84	76.0	*****	*****	4.64	0.0492	3.15	0.59
MAY 26,84	MAY 25,84	1552.0	24.1	4.23	4.37	D 0.0686	2.55	0.33

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : MELBOURNE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 5,84	JAN 4,84	0.07	0.12	0.015	<T 0.005	0.045	0.016	0.0275
JAN 6,84	JAN 5,84	*****	0.14	*****	*****	*****	0.154	0.0525
JAN 8,84	JAN 7,84	*****	0.19	*****	*****	*****	0.500	0.0575
JAN 10,84	JAN 9,84	*****	0.06	*****	*****	*****	*****	0.0251
JAN 14,84	JAN 13,84	0.12	0.46	0.025	0.020	0.125	0.172	0.0977
JAN 24,84	JAN 23,84	*****	*****	*****	*****	*****	*****	0.0813
JAN 27,84	JAN 26,84	*****	G 0.97	*****	*****	*****	*****	0.1738
JAN 31,84	JAN 30,84	0.16	0.26	0.015	<T 0.010	0.040	0.190	0.0631
FEB 3,84	FEB 2,84	0.32	0.25	0.030	0.180	0.190	0.530	0.0676
FEB 7,84	FEB 4,84	*****	0.42	*****	*****	*****	0.790	0.0977
FEB 11,84	FEB 10,84	0.12	0.19	0.015	0.030	0.100	0.290	0.0871
FEB 13,84	FEB 12,84	*****	0.52	*****	*****	*****	*****	0.0398
FEB 14,84	FEB 13,84	0.03	0.12	0.010	<T 0.005	0.055	0.132	0.0427
FEB 25,84	FEB 24,84	0.08	<W 0.01	0.010	<W 0.005	<T 0.010	0.076	0.0214
MAR 5,84	MAR 4,84	0.50	0.17	0.065	0.040	0.075	0.232	0.0646
MAR 6,84	MAR 5,84	0.22	0.04	0.035	0.025	0.015	0.080	0.0437
MAR 16,84	MAR 15,84	0.11	0.10	0.020	<T 0.010	0.035	0.188	0.0407
MAR 21,84	MAR 20,84	0.36	0.46	0.065	0.045	0.185	0.580	0.1318
MAR 22,84	MAR 21,84	0.07	0.12	0.015	<W 0.005	0.020	0.144	0.0759
MAR 23,84	MAR 22,84	*****	0.24	*****	*****	*****	0.052	0.0759
MAR 29,84	MAR 28,84	*****	*****	*****	*****	*****	*****	*****
APR 4,84	APR 3,84	*****	*****	*****	*****	*****	*****	G 0.0069
APR 5,84	APR 4,84	0.28	0.10	0.045	<T 0.010	0.035	0.088	0.0288
APR 16,84	APR 15,84	0.28	0.25	0.050	0.055	0.045	0.625	0.1072
APR 17,84	APR 16,84	0.14	0.14	0.015	0.100	0.080	0.545	0.0363
APR 18,84	APR 17,84	0.21	0.15	0.030	0.140	0.210	0.230	0.0269
APR 20,84	APR 19,84	0.16	0.19	0.030	<T 0.010	<T 0.010	0.480	0.1549
APR 23,84	APR 22,84	1.02	0.09	G 0.220	0.030	0.040	0.115	B 0.0000
APR 24,84	APR 23,84	0.12	0.12	0.025	<W 0.005	<T 0.010	0.305	0.1023
MAY 8,84	MAY 7,84	1.84	0.54	0.315	0.180	0.290	1.250	0.0347
MAY 9,84	MAY 8,84	0.31	0.15	0.065	0.025	0.025	0.845	0.0257
MAY 10,84	MAY 9,84	*****	*****	*****	*****	*****	*****	G 0.0001
MAY 14,84	MAY 13,84	0.15	0.04	0.020	<T 0.010	<T 0.010	0.345	0.0162
MAY 15,84	MAY 14,84	*****	0.25	*****	*****	*****	1.100	G 0.0000
MAY 18,84	MAY 17,84	1.91	0.30	G 0.355	0.070	0.055	1.150	0.0513
MAY 21,84	MAY 20,84	G 2.70	0.31	G 0.410	0.100	0.120	G 2.300	G 0.0001
MAY 22,84	MAY 21,84	*****	*****	*****	*****	*****	*****	0.2512
MAY 23,84	MAY 22,84	0.11	0.04	0.025	0.035	<T 0.010	0.265	0.0166
MAY 24,84	MAY 23,84	*****	0.19	*****	*****	*****	*****	0.0229
MAY 26,84	MAY 25,84	0.16	0.07	0.030	0.020	<T 0.005	0.315	0.0427

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : MELBOURNE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
MAY 29,84	MAY 28,84	800 800	1600 1700	1	13.9	1	61037	2	1	95	
JUN 1,84	MAY 31,84	800 800	****	1	2.2	1	61038	2	1	88	CD HM
JUN 3,84	JUN 2,84	800 800	2400 100	1	3.9	1	61039	2	1	95	C
JUN 6,84	JUN 5,84	800 800	****	1	0.9	1	61040	2	1	58	
JUN 7,84	JUN 6,84	800 800	1530 1630	1	3.3	1	61041	2	1	101	CD
JUN 14,84	JUN 13,84	800 800	1800 1900	1	8.9	1	61043	2	1	69	C
JUN 18,84	JUN 17,84	800 800	****	1	****	1	61044	2	1	****	
JUN 19,84	JUN 18,84	800 800	****	1	2.2	1	61047	2	1	13	CI
JUN 26,84	JUN 25,84	800 900	2200 200	1	10.0	1	61048	2	1	100	B
JUN 28,84	JUN 27,84	800 800	****	1	13.3	1	61049	2	1	93	
JUL 5,84	JUL 4,84	800 800	****	1	11.7	1	61050	2	1	88	
JUL 6,84	JUL 5,84	800 930	700 930	1	16.5	1	61051	2	1	97	
JUL 7,84	JUL 6,84	930 800	****	1	7.9	1	61052	2	1	98	
JUL 10,84	JUL 9,84	800 800	2400 700	1	19.5	1	61053	2	1	99	
JUL 11,84	JUL 10,84	900 900	****	1	1.6	1	61054	2	1	65	
JUL 18,84	JUL 11,84	900 900	****	1	10.0	1	61055	2	1	105	Z
JUL 19,84	JUL 18,84	900 900	****	1	1.1	1	61056	2	1	87	
JUL 24,84	JUL 23,84	800 800	2100 2300	1	3.3	1	61057	2	1	104	C
JUL 27,84	JUL 26,84	800 1230	****	1	2.4	1	61058	2	1	48	N
AUG 3,84	AUG 2,84	800 1000	1300 1600	1	22.6	1	61059	2	1	99	
AUG 5,84	AUG 3,84	1000 900	1200 1500	1	25.0	1	61060	2	1	204	C NZ
AUG 7,84	AUG 5,84	900 900	2400 300	1	13.4	1	61061	2	1	99	Z
AUG 9,84	AUG 7,84	900 900	2000 2200	1	13.6	1	61062	2	1	83	Z
AUG 12,84	AUG 9,84	900 900	****	1	3.0	1	61063	2	1	62	C Z
AUG 13,84	AUG 12,84	900 1000	****	1	4.0	1	61064	2	1	92	CD
AUG 19,84	AUG 18,84	800 800	1700 2200	1	15.1	1	61065	2	1	83	
AUG 23,84	AUG 22,84	800 800	****	1	1.6	1	61066	2	1	54	C
AUG 28,84	AUG 27,84	800 800	400 800	1	2.8	1	61067	2	1	81	
AUG 29,84	AUG 28,84	800 800	****	1	46.0	1	61068	2	1	100	C
AUG 31,84	AUG 30,84	800 800	800 1200	1	13.9	1	61069	2	1	98	
SEP 3,84	SEP 2,84	800 900	****	1	22.7	1	61070	2	1	101	
SEP 8,84	SEP 7,84	800 900	****	1	1.3	1	61071	2	1	25	N
SEP 10,84	SEP 9,84	800 800	****	1	24.9	1	61072	2	1	100	
SEP 11,84	SEP 10,84	800 800	****	1	4.0	1	61073	2	1	86	C
SEP 14,84	SEP 13,84	800 800	****	1	19.3	1	61074	2	1	99	
SEP 15,84	SEP 14,84	800 800	****	1	2.3	1	61075	2	1	84	
SEP 16,84	SEP 15,84	800 800	1500 1700	1	1.5	1	61076	2	1	70	
SEP 24,84	SEP 23,84	800 800	****	1	3.9	1	61077	2	1	40	N
SEP 26,84	SEP 25,84	800 800	****	1	45.0	1	61078	2	1	62	
OCT 8,84	OCT 7,84	800 800	****	1	10.2	1	61080	2	1	56	



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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM				#01	PAGE : 5				
REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L	
MAY 29,84	MAY 28,84	851.0	23.5	4.43	4.38	0.0628	2.80	0.28	
JUN 1,84	MAY 31,84	125.0	22.6	*****	G 5.41	0.0200	3.45	0.89	
JUN 3,84	JUN 2,84	240.0	53.2	3.98	4.11	0.1132	6.25	0.81	
JUN 6,84	JUN 5,84	34.0	*****	*****	3.41	G 0.4700	> 10.00	> 2.00	
JUN 7,84	JUN 6,84	214.0	48.4	4.20	4.43	0.0714	5.75	1.39	
JUN 14,84	JUN 13,84	397.0	31.0	4.17	4.44	0.0634	4.50	0.61	
JUN 18,84	JUN 17,84	4528.0	72.2	3.62	3.79	0.1772	7.30	0.79	
JUN 19,84	JUN 18,84	19.0	*****	*****	*****	*****	*****	*****	
JUN 26,84	JUN 25,84	647.0	44.1	3.98	4.06	0.1152	4.75	0.50	
JUN 28,84	JUN 27,84	793.0	31.0	4.25	4.31	0.0862	3.80	0.50	
JUL 5,84	JUL 4,84	664.0	59.4	3.92	3.98	0.1366	7.35	0.75	
JUL 6,84	JUL 5,84	1035.0	32.6	4.17	4.26	0.0824	3.85	0.46	
JUL 7,84	JUL 6,84	500.0	30.0	4.18	4.26	0.0800	2.80	0.53	
JUL 10,84	JUL 9,84	1248.0	27.1	4.15	4.29	0.0732	2.70	0.41	
JUL 11,84	JUL 10,84	67.0	*****	*****	3.95	0.1366	6.20	0.71	
JUL 18,84	JUL 11,84	675.0	21.8	4.39	4.47	0.0510	2.50	0.46	
JUL 19,84	JUL 18,84	62.0	*****	*****	G 5.95	0.0184	1.50	0.37	
JUL 24,84	JUL 23,84	221.0	50.0	4.10	4.15	0.0992	5.65	1.28	
JUL 27,84	JUL 26,84	74.0	*****	*****	3.89	0.1454	5.70	0.87	
AUG 3,84	AUG 2,84	1448.0	56.0	3.92	3.93	0.1360	5.45	0.73	
AUG 5,84	AUG 3,84	3283.0	31.7	*****	4.20	0.0782	4.10	0.31	
AUG 7,84	AUG 5,84	856.0	48.0	3.96	4.02	0.1144	5.35	0.51	
AUG 9,84	AUG 7,84	727.0	43.7	4.05	4.10	0.1124	4.00	0.62	
AUG 12,84	AUG 9,84	120.0	28.7	*****	G 6.47	0.0266	5.20	1.08	
AUG 13,84	AUG 12,84	238.0	13.9	G 6.88	G 7.11	0.0202	1.10	0.18	
AUG 19,84	AUG 18,84	808.0	39.5	4.09	4.15	D 0.1020	3.80	0.51	
AUG 23,84	AUG 22,84	56.0	*****	*****	4.65	0.0484	3.85	0.41	
AUG 28,84	AUG 27,84	147.0	25.0	*****	4.32	0.0674	2.00	0.37	
AUG 29,84	AUG 28,84	2951.0	43.0	4.11	4.13	0.0990	4.55	0.57	
AUG 31,84	AUG 30,84	882.0	43.9	4.08	4.09	0.1026	4.35	0.54	
SEP 3,84	SEP 2,84	1473.0	34.4	4.24	4.28	0.0782	4.05	0.51	
SEP 8,84	SEP 7,84	21.0	*****	*****	3.85	0.1956	*****	*****	
SEP 10,84	SEP 9,84	1608.0	27.4	4.22	4.30	0.0728	2.65	0.29	
SEP 11,84	SEP 10,84	222.0	73.6	3.83	3.85	0.1732	6.05	1.12	
SEP 14,84	SEP 13,84	1235.0	30.9	*****	4.30	0.0742	3.60	0.53	
SEP 15,84	SEP 14,84	124.0	17.9	*****	4.52	0.0510	2.00	0.21	
SEP 16,84	SEP 15,84	68.0	*****	*****	4.89	0.0326	1.30	0.04	
SEP 24,84	SEP 23,84	101.0	28.5	*****	4.37	0.0740	3.70	0.49	
SEP 26,84	SEP 25,84	1802.0	20.2	*****	4.50	0.0540	2.10	0.28	
OCT 8,84	OCT 7,84	371.0	55.0	*****	3.97	0.1370	5.25	0.77	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

#01

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
MAY 29,84	MAY 28,84	0.31	0.06	0.075	0.020	<T 0.010	0.200	0.0417
JUN 1,84	MAY 31,84	1.54	0.18	0.305	0.115	0.055	1.250	G 0.0039
JUN 3,84	JUN 2,84	1.08	0.33	0.155	0.080	0.040	0.720	0.0776
JUN 6,84	JUN 5,84	*****	G 0.97	*****	*****	*****	*****	0.3890
JUN 7,84	JUN 6,84	G 1.98	0.71	0.335	0.110	0.245	0.910	0.0372
JUN 14,84	JUN 13,84	0.96	0.24	0.175	0.070	0.090	0.585	0.0363
JUN 18,84	JUN 17,84	0.22	0.23	0.035	0.080	0.040	0.695	0.1622
JUN 19,84	JUN 18,84	*****	*****	*****	*****	*****	*****	*****
JUN 26,84	JUN 25,84	0.10	0.09	0.025	<T 0.010	<T 0.005	0.515	0.0871
JUN 28,84	JUN 27,84	0.38	0.12	0.080	0.160	0.020	0.580	0.0490
JUL 5,84	JUL 4,84	0.62	0.16	0.105	0.045	0.015	1.000	0.1047
JUL 6,84	JUL 5,84	0.07	0.06	0.015	0.025	<T 0.005	0.720	0.0550
JUL 7,84	JUL 6,84	0.12	0.10	0.015	0.020	0.015	0.475	0.0550
JUL 10,84	JUL 9,84	0.23	0.09	0.040	0.035	0.050	0.275	0.0513
JUL 11,84	JUL 10,84	*****	0.28	*****	*****	*****	0.690	0.1122
JUL 18,84	JUL 11,84	0.35	0.16	0.095	0.080	0.065	0.390	0.0339
JUL 19,84	JUL 18,84	*****	0.10	*****	*****	*****	0.540	G 0.0011
JUL 24,84	JUL 23,84	1.45	0.29	0.255	0.120	0.075	0.755	0.0708
JUL 27,84	JUL 26,84	*****	0.23	*****	*****	*****	0.085	0.1288
AUG 3,84	AUG 2,84	0.28	0.16	0.060	<T 0.010	0.015	0.485	0.1175
AUG 5,84	AUG 3,84	0.21	0.10	0.030	0.030	0.025	0.550	0.0631
AUG 7,84	AUG 5,84	0.28	0.15	0.050	0.030	<T 0.005	0.500	0.0955
AUG 9,84	AUG 7,84	0.24	0.19	0.040	0.030	0.030	0.320	0.0794
AUG 12,84	AUG 9,84	G 1.95	0.27	G 0.360	0.125	0.040	1.250	G 0.0003
AUG 13,84	AUG 12,84	1.10	0.18	0.170	0.160	0.050	0.725	G 0.0001
AUG 19,84	AUG 18,84	0.29	0.15	0.050	0.015	<W 0.005	0.300	0.0708
AUG 23,84	AUG 22,84	*****	0.17	*****	*****	*****	0.575	0.0224
AUG 28,84	AUG 27,84	0.12	0.10	0.015	<T 0.010	<T 0.010	0.135	0.0479
AUG 29,84	AUG 28,84	D 0.23	0.10	0.045	<W 0.005	0.025	0.580	0.0741
AUG 31,84	AUG 30,84	0.23	0.11	0.035	0.035	0.060	0.390	0.0813
SEP 3,84	SEP 2,84	0.48	0.11	0.080	0.040	0.060	0.435	0.0525
SEP 8,84	SEP 7,84	*****	*****	*****	*****	*****	*****	0.1413
SEP 10,84	SEP 9,84	0.03	0.14	0.015	<W 0.005	0.095	0.215	0.0501
SEP 11,84	SEP 10,84	0.21	0.24	0.050	0.030	0.070	0.585	0.1413
SEP 14,84	SEP 13,84	0.66	0.23	0.060	0.030	0.180	0.275	0.0501
SEP 15,84	SEP 14,84	0.14	0.06	0.030	0.020	0.000	0.185	0.0302
SEP 16,84	SEP 15,84	*****	0.10	*****	*****	*****	0.060	0.0129
SEP 24,84	SEP 23,84	0.51	0.17	0.080	0.035	0.065	0.365	0.0427
SEP 26,84	SEP 25,84	0.07	0.11	0.015	<T 0.005	0.075	0.320	0.0316
OCT 8,84	OCT 7,84	0.34	0.15	0.050	0.050	0.020	0.530	0.1072



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

#01

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
OCT 18,84	OCT 17,84	800 800	**** ****	1	2.1	1	61081	2	1	40	N
OCT 19,84	OCT 18,84	800 800	600 800	1	5.5	1	61082	2	1	71	
OCT 20,84	OCT 19,84	800 800	800 1300	1	1.9	1	61083	2	1	64	
OCT 21,84	OCT 20,84	800 800	300 700	1	3.5	1	61084	2	1	59	
OCT 26,84	OCT 25,84	800 800	**** ****	1	6.7	1	61085	2	1	49	N
NOV 2,84	NOV 1,84	800 800	**** ****	1	9.0	1	61086	2	1	53	
NOV 4,84	NOV 3,84	800 1000	700 1000	1	10.9	1	61087	2	1	63	
NOV 5,84	NOV 4,84	1000 800	1000 1500	1	12.5	1	61088	2	1	66	
NOV 10,84	NOV 9,84	800 800	**** ****	1	12.9	1	61089	2	1	91	
NOV 11,84	NOV 10,84	800 800	**** ****	1	18.7	1	61090	2	1	95	
NOV 12,84	NOV 11,84	800 800	**** ****	1	1.2	1	61091	2	1	91	
NOV 15,84	NOV 14,84	800 800	**** ****	1	2.3	1	61092	2	1	115	
NOV 16,84	NOV 15,84	800 1500	**** ****	1	4.7	1	61093	2	1	85	
NOV 28,84	NOV 27,84	800 800	**** 800	2	5.7	2	61094	2	1	105	
NOV 29,84	NOV 28,84	800 800	800 ****	1	4.3	2	61095	2	1	90	
DEC 3,84	DEC 2,84	800 800	**** ****	1	6.4	2	61096	2	1	118	
DEC 6,84	DEC 5,84	800 800	2000 800	2	4.2	2	61097	2	1	83	
DEC 10,84	DEC 9,84	800 800	**** 800	1	2.5	2	61098	2	1	101	
DEC 11,84	DEC 10,84	800 800	**** ****	1	3.3	2	61099	2	1	103	
DEC 13,84	DEC 12,84	800 800	**** ****	1	3.4	2	61100	2	1	85	
DEC 15,84	DEC 14,84	800 800	**** ****	1	0.9	2	61101	2	1	98	
DEC 20,84	DEC 19,84	800 800	**** ****	3	5.0	2	61102	2	1	81	
DEC 22,84	DEC 21,84	800 800	1800 2300	1	27.5	2	61103	2	1	96	
DEC 27,84	DEC 26,84	800 800	**** ****	2	7.7	2	61104	2	1	45	NH
DEC 28,84	DEC 27,84	800 900	**** ****	1	5.5	2	61105	2	1	100	
DEC 29,84	DEC 28,84	900 900	**** ****	1	1.9	2	61106	2	1	180	N
DEC 30,84	DEC 29,84	900 800	**** ****	1	9.8	2	61107	2	1	112	E

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

#01

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
OCT 18,84	OCT 17,84	55.0	*****	*****	3.83	0.1884	8.15	1.31
OCT 19,84	OCT 18,84	252.0	22.5	*****	G 6.48	0.0240	4.20	0.48
OCT 20,84	OCT 19,84	78.0	*****	*****	4.18	0.0924	5.25	0.52
OCT 21,84	OCT 20,84	134.0	*****	*****	4.05	0.1312	5.40	0.70
OCT 26,84	OCT 25,84	214.0	50.5	*****	4.08	0.1206	4.20	0.99
NOV 2,84	NOV 1,84	308.0	21.6	*****	4.65	0.0516	2.80	0.45
NOV 4,84	NOV 3,84	445.0	34.6	*****	4.17	0.0918	3.30	0.32
NOV 5,84	NOV 4,84	530.0	13.2	*****	D 4.60	0.0434	1.35	0.09
NOV 10,84	NOV 9,84	754.0	44.3	*****	4.12	0.1046	4.00	0.73
NOV 11,84	NOV 10,84	1139.0	37.1	*****	4.15	0.0970	2.30	0.76
NOV 12,84	NOV 11,84	70.0	12.8	*****	4.70	0.0390	1.40	0.22
NOV 15,84	NOV 14,84	171.0	26.7	*****	4.31	0.0716	2.50	0.38
NOV 16,84	NOV 15,84	259.0	31.3	*****	4.28	0.0796	2.95	0.46
NOV 28,84	NOV 27,84	384.0	29.4	*****	4.42	0.0642	3.10	0.69
NOV 29,84	NOV 28,84	250.0	16.2	*****	4.53	0.0486	1.40	0.18
DEC 3,84	DEC 2,84	487.0	46.9	*****	4.05	0.1206	2.85	1.01
DEC 6,84	DEC 5,84	225.0	13.5	*****	4.67	0.0390	0.35	0.51
DEC 10,84	DEC 9,84	162.0	69.5	*****	3.85	0.1718	4.80	1.29
DEC 11,84	DEC 10,84	220.0	36.6	*****	4.11	0.0996	1.90	0.67
DEC 13,84	DEC 12,84	186.0	> 100.0	*****	3.72	G 0.2380	8.45	1.85
DEC 15,84	DEC 14,84	57.0	39.7	*****	4.18	0.0958	5.00	0.37
DEC 20,84	DEC 19,84	262.0	D 28.7	*****	4.24	0.0746	1.75	0.63
DEC 22,84	DEC 21,84	1699.0	15.1	*****	4.56	0.0464	1.20	0.17
DEC 27,84	DEC 26,84	226.0	18.0	*****	G 5.81	0.0222	2.15	0.66
DEC 28,84	DEC 27,84	354.0	50.0	*****	3.99	0.1286	3.90	0.85
DEC 29,84	DEC 28,84	220.0	32.5	*****	4.39	0.0652	4.20	0.50
DEC 30,84	DEC 29,84	704.0	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MELBOURNE/DAILY/AEROCHEM

#01

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
OCT 18,84	OCT 17,84	*****	0.55	*****	*****	*****	1.050	0.1479
OCT 19,84	OCT 18,84	1.69	G 0.90	0.270	G 0.800	G 0.830	0.205	G 0.0003
OCT 20,84	OCT 19,84	1.10	0.41	0.195	0.180	0.335	0.205	0.0661
OCT 21,84	OCT 20,84	0.47	0.35	0.075	0.090	0.210	0.400	0.0891
OCT 26,84	OCT 25,84	0.24	0.30	0.030	0.055	0.060	0.710	0.0832
NOV 2,84	NOV 1,84	0.56	0.21	0.095	D 0.180	0.045	0.360	0.0224
NOV 4,84	NOV 3,84	0.10	0.19	0.010	<W 0.005	0.045	0.180	0.0676
NOV 5,84	NOV 4,84	<T 0.01	0.07	<W 0.005	<W 0.005	<T 0.010	0.090	D 0.0251
NOV 10,84	NOV 9,84	0.37	0.50	0.055	0.035	0.305	0.445	0.0759
NOV 11,84	NOV 10,84	0.06	0.15	<W 0.005	0.015	0.025	0.300	0.0708
NOV 12,84	NOV 11,84	*****	0.10	*****	*****	*****	0.240	0.0200
NOV 15,84	NOV 14,84	0.20	0.19	0.025	0.020	0.080	0.185	0.0490
NOV 16,84	NOV 15,84	0.17	0.22	0.015	<T 0.010	0.070	0.390	0.0525
NOV 28,84	NOV 27,84	0.78	0.40	0.150	0.035	0.235	0.350	0.0380
NOV 29,84	NOV 28,84	0.09	0.05	0.005	<T 0.005	<T 0.005	0.085	0.0295
DEC 3,84	DEC 2,84	0.34	0.25	0.035	0.015	0.035	0.395	0.0891
DEC 6,84	DEC 5,84	0.30	0.11	0.045	<T 0.005	D 0.040	0.035	0.0214
DEC 10,84	DEC 9,84	0.31	0.45	0.035	0.025	0.280	0.520	0.1413
DEC 11,84	DEC 10,84	0.08	0.19	<W 0.005	0.010	0.045	0.175	0.0776
DEC 13,84	DEC 12,84	0.44	0.66	0.055	0.110	0.400	G 1.400	0.1905
DEC 15,84	DEC 14,84	*****	0.26	*****	*****	*****	0.280	0.0661
DEC 20,84	DEC 19,84	0.21	0.24	0.035	<W 0.005	0.120	D 0.210	0.0575
DEC 22,84	DEC 21,84	0.08	0.06	0.015	<T 0.005	<W 0.005	0.080	0.0275
DEC 27,84	DEC 26,84	1.05	0.62	0.195	0.080	0.475	0.375	G 0.0015
DEC 28,84	DEC 27,84	0.26	0.31	0.030	0.025	0.055	0.650	0.1023
DEC 29,84	DEC 28,84	0.24	0.67	0.100	0.075	0.525	0.895	0.0407
DEC 30,84	DEC 29,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 9,84	JAN 8,84	800 800	**** ****	2	7.6	2	63104	2	1	U 4	CDI
JAN 11,84	JAN 10,84	800 800	**** ****	2	0.6	2	63105	2	1	****	EIK
JAN 18,84	JAN 17,84	800 800	**** ****	2	1.6	2	63106	2	1	****	EIK
JAN 20,84	JAN 19,84	800 800	**** ****	2	0.1	2	63107	2	1	46	E
JAN 24,84	JAN 23,84	800 800	**** ****	2	7.4	2	63108	2	1	68	
JAN 27,84	JAN 26,84	800 800	**** ****	2	9.2	2	63109	2	1	64	
JAN 29,84	JAN 28,84	800 800	**** ****	2	3.6	2	63110	2	1	29	N
JAN 30,84	JAN 29,84	800 800	**** ****	2	0.4	2	63111	2	1	253	N
JAN 31,84	JAN 30,84	800 800	**** ****	2	1.5	2	63112	2	1	****	E
FEB 4,84	FEB 4,84	800 800	**** ****	3	1.4	2	63114	2	1	****	IE
FEB 5,84	FEB 4,84	800 800	**** ****	2	0.1	2	63115	2	1	374	
FEB 11,84	FEB 10,84	800 800	**** ****	3	****	2	63117	2	1	****	D
FEB 14,84	FEB 13,84	800 800	**** ****	1	27.8	2	63119	2	1	108	D
FEB 20,84	FEB 19,84	800 800	1800 2400	3	3.6	2	63122	2	1	77	
FEB 21,84	FEB 20,84	800 800	**** ****	2	1.2	2	63123	2	1	****	EIK
FEB 25,84	FEB 24,84	800 1200	**** ****	2	7.4	2	63124	2	1	****	EIK
FEB 28,84	FEB 27,84	800 800	1800 800	2	4.0	2	63125	2	1	U 8	CDI
MAR 1,84	FEB 29,84	800 800	**** ****	2	1.4	2	63127	2	1	U 27	CI
MAR 2,84	MAR 1,84	800 800	2000 2100	2	1.1	2	63128	2	1	17	N
MAR 3,84	MAR 2,84	800 900	**** ****	2	1.3	2	63129	2	1	****	E
MAR 5,84	MAR 3,84	900 900	300 700	3	14.4	2	63130	2	1	70	C Z
MAR 6,84	MAR 5,84	900 900	**** ****	3	0.8	2	63131	2	1	****	EIK
MAR 7,84	MAR 6,84	900 915	1200 1700	2	0.2	2	63132	2	1	****	EIK
MAR 10,84	MAR 7,84	915 900	**** ****	2	0.6	2	63133	2	1	****	EIK Z
MAR 11,84	MAR 10,84	900 1200	**** ****	2	2.7	2	63134	2	1	****	EIK
MAR 12,84	MAR 11,84	1200 900	**** ****	2	0.2	2	63135	2	1	****	EIK
MAR 13,84	MAR 12,84	900 915	**** ****	2	5.4	2	63136	2	1	****	EIK
MAR 14,84	MAR 13,84	915 900	**** ****	2	1.0	2	63137	2	1	29	N
MAR 16,84	MAR 14,84	900 900	**** ****	1	31.4	2	63138	2	1	96	Z
MAR 17,84	MAR 16,84	900 900	900 1030	3	2.9	2	63139	2	1	95	
MAR 21,84	MAR 20,84	900 800	1900 800	1	7.4	2	63140	2	1	89	CD
MAR 22,84	MAR 21,84	800 800	800 800	2	10.2	2	63141	2	1	38	C N
MAR 23,84	MAR 22,84	800 800	800 800	2	4.5	2	63142	2	1	U 10	CDI
MAR 30,84	MAR 29,84	800 800	**** ****	2	2.7	2	63144	2	1	25	N
APR 5,84	APR 4,84	800 800	**** ****	1	11.9	2	63145	2	1	100	
APR 7,84	APR 6,84	800 800	**** ****	1	1.9	1	63146	2	1	45	N
APR 13,84	APR 12,84	1130 800	**** ****	1	2.8	1	63149	2	1	85	C
APR 14,84	APR 13,84	800 800	**** ****	1	1.0	1	63150	2	1	34	N
APR 15,84	APR 14,84	800 800	**** ****	1	6.8	1	63151	2	1	98	
APR 16,84	APR 15,84	800 800	**** ****	1	3.1	1	63152	2	1	76	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 9,84	JAN 8,84	22.0	*****	*****	4.67	0.0488	*****	*****
JAN 11,84	JAN 10,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	3.0	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	323.0	21.2	*****	4.44	0.0584	1.25	0.45
JAN 27,84	JAN 26,84	380.0	*****	*****	4.21	0.0894	1.95	1.07
JAN 29,84	JAN 28,84	67.0	*****	*****	4.13	0.1030	2.55	1.10
JAN 30,84	JAN 29,84	65.0	*****	*****	4.05	0.1208	2.80	1.20
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	24.0	*****	*****	3.81	0.2080	*****	*****
FEB 11,84	FEB 10,84	298.0	38.5	3.90	4.08	0.1066	2.70	0.77
FEB 14,84	FEB 13,84	1942.0	15.5	4.28	4.49	0.0514	1.15	0.21
FEB 20,84	FEB 19,84	178.0	30.1	*****	4.28	0.0784	2.65	0.63
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 25,84	FEB 24,84	*****	*****	*****	*****	*****	*****	*****
FEB 28,84	FEB 27,84	21.0	*****	*****	6 7.36	0.0148	*****	*****
MAR 1,84	FEB 29,84	25.0	*****	*****	6 7.42	0.0144	*****	*****
MAR 2,84	MAR 1,84	12.0	*****	*****	*****	*****	*****	*****
MAR 3,84	MAR 2,84	*****	*****	*****	*****	*****	*****	*****
MAR 5,84	MAR 3,84	647.0	18.2	4.39	4.56	0.0498	1.35	0.45
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 7,84	MAR 6,84	*****	*****	*****	*****	*****	*****	*****
MAR 10,84	MAR 7,84	*****	*****	*****	*****	*****	*****	*****
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 12,84	MAR 11,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	19.0	*****	*****	3.83	0.1924	*****	*****
MAR 16,84	MAR 14,84	1948.0	28.9	4.24	4.24	0.0844	2.55	0.32
MAR 17,84	MAR 16,84	178.0	12.9	*****	4.69	0.0408	1.40	0.10
MAR 21,84	MAR 20,84	426.0	63.5	3.88	3.99	0.1494	6.25	1.11
MAR 22,84	MAR 21,84	253.0	37.8	4.11	4.17	0.1022	3.05	0.63
MAR 23,84	MAR 22,84	30.0	*****	*****	4.29	0.0902	*****	*****
MAR 30,84	MAR 29,84	44.0	*****	*****	*****	0.0162	0.45	0.24
APR 5,84	APR 4,84	769.0	7.6	4.77	5.00	0.0314	0.85	0.30
APR 7,84	APR 6,84	55.0	*****	*****	4.32	0.0748	4.60	0.85
APR 13,84	APR 12,84	153.0	6 89.0	*****	3.77	0.2100	5.40	6 2.54
APR 14,84	APR 13,84	22.0	*****	*****	*****	*****	*****	*****
APR 15,84	APR 14,84	428.0	48.0	4.01	4.04	0.1272	3.35	1.01
APR 16,84	APR 15,84	152.0	67.6	*****	3.90	0.1706	4.05	1.64

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	0.0214
JAN 11,84	JAN 10,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	*****	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	0.13	0.23	0.020	0.030	0.115	0.130	0.0363
JAN 27,84	JAN 26,84	*****	0.36	0.035	0.020	0.080	0.600	0.0617
JAN 29,84	JAN 28,84	*****	0.49	*****	*****	*****	0.520	0.0741
JAN 30,84	JAN 29,84	*****	0.53	*****	*****	*****	0.590	0.0891
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	*****	*****	*****	*****	*****	*****	0.1549
FEB 11,84	FEB 10,84	0.26	0.28	0.020	0.040	0.145	0.294	0.0832
FEB 14,84	FEB 13,84	0.05	0.09	D 0.010	<T 0.010	0.055	0.076	0.0324
FEB 20,84	FEB 19,84	0.24	0.37	0.030	0.165	0.275	0.440	0.0525
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 25,84	FEB 24,84	*****	*****	*****	*****	*****	*****	*****
FEB 26,84	FEB 27,84	*****	*****	*****	*****	*****	*****	G 0.0000
MAR 1,84	FEB 29,84	*****	*****	*****	*****	*****	*****	G 0.0000
MAR 2,84	MAR 1,84	*****	*****	*****	*****	*****	*****	*****
MAR 3,84	MAR 2,84	*****	*****	*****	*****	*****	*****	*****
MAR 5,84	MAR 3,84	0.30	0.19	0.050	0.020	0.100	0.156	0.0275
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 7,84	MAR 6,84	*****	*****	*****	*****	*****	*****	*****
MAR 10,84	MAR 7,84	*****	*****	*****	*****	*****	*****	*****
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 12,84	MAR 11,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	0.1479
MAR 16,84	MAR 14,84	0.17	0.09	0.020	<T 0.010	0.030	0.144	0.0575
MAR 17,84	MAR 16,84	0.14	0.04	0.045	<T 0.010	0.030	0.042	0.0204
MAR 21,84	MAR 20,84	0.76	0.79	G 0.215	D 0.175	0.425	0.520	0.1023
MAR 22,84	MAR 21,84	0.15	0.19	0.040	<T 0.015	0.040	0.240	0.0676
MAR 23,84	MAR 22,84	*****	*****	*****	*****	*****	*****	0.0513
MAR 30,84	MAR 29,84	*****	D 0.35	*****	*****	*****	*****	*****
APR 5,84	APR 4,84	0.22	0.11	0.055	0.020	0.075	0.142	0.0100
APR 7,84	APR 6,84	*****	0.12	*****	*****	*****	0.630	0.0479
APR 13,84	APR 12,84	G 1.56	0.79	0.185	0.170	0.270	0.410	0.1698
APR 14,84	APR 13,84	*****	*****	*****	*****	*****	*****	*****
APR 15,84	APR 14,84	0.21	0.21	0.030	0.045	0.165	0.410	0.0912
APR 16,84	APR 15,84	0.44	0.54	0.060	G 0.215	0.225	0.540	0.1259

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
APR 17,84	APR 16,84	800 800	**** ****	3	2.5	1	63153	2	1	121	NJ
APR 18,84	APR 17,84	800 800	**** ****	1	2.4	1	63154	2	1	39	N
APR 19,84	APR 18,84	800 800	**** ****	1	3.4	1	63155	2	1	92	
APR 23,84	APR 22,84	800 800	**** ****	1	4.6	1	63156	2	1	91	
APR 24,84	APR 23,84	800 800	**** ****	1	1.6	1	63157	2	1	45	N
MAY 1,84	APR 30,84	800 800	**** ****	1	2.6	1	63158	2	1	81	C
MAY 2,84	MAY 1,84	800 800	**** ****	1	3.6	1	63159	2	1	69	C H
MAY 8,84	MAY 7,84	800 800	**** ****	1	6.0	1	63160	2	1	70	C
MAY 9,84	MAY 8,84	800 800	800 930	1	5.5	1	63161	2	1	83	C
MAY 10,84	MAY 9,84	800 800	**** ****	1	1.2	1	63162	2	1	66	C
MAY 11,84	MAY 10,84	800 800	**** ****	1	0.8	1	63163	2	1	37	C N
MAY 14,84	MAY 13,84	800 800	**** ****	3	19.7	1	63164	2	1	67	C
MAY 18,84	MAY 17,84	800 800	2200 750	1	10.5	1	63167	2	1	99	J U
MAY 22,84	MAY 21,84	800 800	**** ****	1	4.3	1	63168	2	1	101	C
MAY 23,84	MAY 22,84	800 800	2230 800	1	20.4	1	63169	2	1	101	
MAY 24,84	MAY 23,84	800 800	1700 1800	1	4.0	1	63170	2	1	87	C H
MAY 26,84	MAY 25,84	800 900	**** ****	1	19.8	1	63171	2	1	104	C
MAY 29,84	MAY 28,84	800 800	1600 1800	1	20.6	1	63174	2	1	96	C
MAY 30,84	MAY 29,84	800 800	800 930	1	1.0	1	63177	2	1	31	C N
JUN 1,84	MAY 31,84	800 800	**** ****	1	1.4	1	63179	2	1	65	CD
JUN 3,84	JUN 2,84	800 800	**** ****	1	17.6	1	63180	2	1	102	C
JUN 7,84	JUN 6,84	800 800	1800 2000	1	8.4	1	63181	2	1	98	CBJ U
JUN 10,84	JUN 9,84	800 800	**** ****	1	2.1	1	63182	2	1	58	ACD
JUN 18,84	JUN 17,84	800 800	**** ****	1	49.0	1	63184	2	1	103	C
JUN 24,84	JUN 23,84	800 800	**** ****	1	4.0	1	63185	2	1	78	C
JUN 25,84	JUN 24,84	800 800	**** ****	1	1.2	1	63186	2	1	80	C
JUN 28,84	JUN 27,84	800 800	930 1030	1	5.4	1	63188	2	1	93	C
JUL 6,84	JUL 5,84	800 800	1600 1700	1	3.3	1	63189	2	1	108	C H
JUL 7,84	JUL 6,84	800 1000	830 1300	1	18.0	*	63190	2	1	97	CD H
JUL 11,84	JUL 10,84	800 800	900 930	1	2.3	1	63191	2	1	57	AC
JUL 16,84	JUL 15,84	800 800	**** ****	1	13.2	1	63192	2	1	102	C
JUL 18,84	JUL 17,84	800 800	**** ****	1	35.0	1	63193	2	1	106	
JUL 19,84	JUL 18,84	800 800	1000 1100	1	1.0	1	63196	2	1	****	EK
JUL 24,84	JUL 23,84	800 800	**** ****	1	0.8	1	63197	2	1	****	EK
AUG 2,84	AUG 1,84	800 800	**** ****	1	2.2	1	63198	2	1	85	CD
AUG 3,84	AUG 2,84	800 800	1700 1900	1	2.3	1	63199	2	1	84	CD
AUG 7,84	AUG 6,84	800 800	**** ****	1	0.8	1	63200	2	1	21	C N
AUG 9,84	AUG 8,84	800 800	**** ****	1	4.6	1	63201	2	1	93	C
AUG 13,84	AUG 12,84	800 800	**** ****	1	13.6	1	63202	2	1	101	CF U
AUG 19,84	AUG 18,84	800 800	1500 2000	1	8.8	1	63203	2	1	84	AC



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 17,84	APR 16,84	195.0	9.0	G 5.40	G 6.10	0.0244	0.85	0.31
APR 18,84	APR 17,84	61.0	*****	*****	4.48	0.0590	2.05	0.45
APR 19,84	APR 18,84	202.0	> 100.0	3.55	3.55	G 0.3260	G 8.95	1.96
APR 23,84	APR 22,84	269.0	17.4	4.51	4.53	0.0532	1.60	0.22
APR 24,84	APR 23,84	47.0	*****	*****	3.60	B 0.2940	*****	*****
MAY 1,84	APR 30,84	135.0	27.7	*****	4.64	0.0610	4.55	0.66
MAY 2,84	MAY 1,84	160.0	23.4	*****	G 5.37	0.0334	4.25	0.59
MAY 8,84	MAY 7,84	271.0	70.1	4.04	4.20	0.1214	10.10	G 2.30
MAY 9,84	MAY 8,84	294.0	15.8	4.72	G 5.05	0.0340	2.00	0.35
MAY 10,84	MAY 9,84	51.0	*****	*****	4.92	0.0454	4.10	0.77
MAY 11,84	MAY 10,84	19.0	*****	*****	*****	0.0446	*****	*****
MAY 14,84	MAY 13,84	854.0	12.1	G 5.19	G 5.39	0.0278	1.60	0.31
MAY 18,84	MAY 17,84	673.0	27.2	4.33	4.37	0.0694	3.10	0.53
MAY 22,84	MAY 21,84	281.0	48.3	3.98	4.03	0.1214	5.05	0.67
MAY 23,84	MAY 22,84	1326.0	13.5	4.63	4.74	0.0368	1.55	0.24
MAY 24,84	MAY 23,84	225.0	12.1	G 5.77	G 6.27	0.0228	1.90	0.40
MAY 26,84	MAY 25,84	1321.0	10.5	4.63	D 4.74	0.0378	1.05	0.18
MAY 29,84	MAY 28,84	1279.0	18.9	4.32	4.43	0.0592	2.10	0.14
MAY 30,84	MAY 29,84	20.0	*****	*****	5.02	0.0350	*****	*****
JUN 1,84	MAY 31,84	59.0	*****	*****	G 6.73	0.0278	4.70	1.22
JUN 3,84	JUN 2,84	1154.0	22.5	4.31	4.35	0.1122	2.55	0.35
JUN 7,84	JUN 6,84	528.0	41.5	4.02	4.13	0.0972	4.60	0.61
JUN 10,84	JUN 9,84	79.0	*****	*****	4.14	0.1040	7.65	1.34
JUN 18,84	JUN 17,84	3246.0	29.0	4.20	4.26	0.0778	2.75	0.42
JUN 24,84	JUN 23,84	200.0	75.3	3.75	3.82	0.1892	7.60	1.12
JUN 25,84	JUN 24,84	62.0	14.0	*****	G 6.56	0.0156	2.20	0.29
JUN 28,84	JUN 27,84	325.0	29.7	4.19	4.25	0.0800	3.80	0.37
JUL 6,84	JUL 5,84	229.0	19.7	G 5.14	G 5.38	0.0260	3.45	0.62
JUL 7,84	JUL 6,84	1124.0	38.7	B 6.72	B 7.36	0.0322	3.55	0.36
JUL 11,84	JUL 10,84	85.0	*****	*****	4.07	0.1338	12.80	2.20
JUL 16,84	JUL 15,84	870.0	61.2	3.84	3.93	0.1392	7.05	0.66
JUL 18,84	JUL 17,84	2385.0	24.0	4.29	4.36	0.0584	1.90	0.42
JUL 19,84	JUL 18,84	*****	*****	*****	*****	*****	*****	*****
JUL 24,84	JUL 23,84	*****	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	121.0	> 100.0	*****	3.84	0.1964	12.40	G 2.75
AUG 3,84	AUG 2,84	124.0	48.0	*****	4.56	0.0692	8.60	1.26
AUG 7,84	AUG 6,84	11.0	*****	*****	*****	*****	*****	*****
AUG 9,84	AUG 8,84	276.0	81.3	3.83	3.87	D 0.1860	8.05	1.20
AUG 13,84	AUG 12,84	886.0	11.7	G 6.61	G 6.81	0.0204	1.65	0.29
AUG 19,84	AUG 18,84	474.0	21.1	4.67	4.81	0.0420	3.50	0.49



ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 17,84	APR 16,84	0.11	0.11	0.020	0.045	0.070	0.475	G 0.0008
APR 18,84	APR 17,84	*****	0.29	*****	*****	*****	0.385	0.0331
APR 19,84	APR 18,84	0.08	0.50	0.015	0.035	0.070	0.755	0.2818
APR 23,84	APR 22,84	0.11	0.24	0.020	<T 0.015	0.020	0.155	0.0295
APR 24,84	APR 23,84	*****	*****	*****	*****	*****	D 1.200	0.2512
MAY 1,84	APR 30,84	0.90	0.35	0.140	0.135	0.245	0.830	0.0229
MAY 2,84	MAY 1,84	0.93	0.18	0.165	0.090	0.075	1.020	G 0.0043
MAY 8,84	MAY 7,84	1.69	0.46	G 0.395	0.155	0.175	B 2.850	0.0631
MAY 9,84	MAY 8,84	0.35	0.16	0.075	0.050	0.085	0.480	G 0.0089
MAY 10,84	MAY 9,84	*****	0.26	*****	*****	*****	1.550	0.0120
MAY 11,84	MAY 10,84	*****	*****	*****	*****	*****	*****	*****
MAY 14,84	MAY 13,84	0.36	0.09	0.045	<T 0.015	0.015	0.480	G 0.0041
MAY 18,84	MAY 17,84	0.54	0.18	0.120	0.020	0.030	0.410	0.0427
MAY 22,84	MAY 21,84	0.23	0.23	0.055	0.040	0.120	0.645	0.0933
MAY 23,84	MAY 22,84	0.09	0.06	0.025	<T 0.015	D 0.025	0.330	0.0182
MAY 24,84	MAY 23,84	0.24	0.11	0.060	0.115	0.035	0.980	G 0.0005
MAY 26,84	MAY 25,84	0.12	0.05	0.040	<T 0.010	<T 0.010	0.100	D 0.0182
MAY 29,84	MAY 28,84	0.05	0.04	0.005	<T 0.005	<T 0.005	0.165	0.0372
MAY 30,84	MAY 29,84	*****	*****	*****	*****	*****	*****	0.0095
JUN 1,84	MAY 31,84	*****	0.31	*****	*****	*****	1.900	G 0.0002
JUN 3,84	JUN 2,84	0.30	0.07	0.060	<T 0.015	<T 0.005	0.315	0.0447
JUN 7,84	JUN 6,84	0.81	0.23	0.170	0.065	0.060	0.190	0.0741
JUN 10,84	JUN 9,84	*****	0.42	*****	*****	*****	1.100	0.0724
JUN 18,84	JUN 17,84	0.15	0.10	0.030	0.035	0.025	0.275	0.0550
JUN 24,84	JUN 23,84	0.55	0.23	0.150	0.075	0.035	0.625	0.1514
JUN 25,84	JUN 24,84	0.72	0.55	0.185	G 0.290	0.400	*****	G 0.0003
JUN 28,84	JUN 27,84	0.24	0.10	0.050	0.045	0.020	0.470	0.0562
JUL 6,84	JUL 5,84	0.60	0.30	0.130	0.160	D 0.255	1.050	G 0.0042
JUL 7,84	JUL 6,84	D 0.53	0.21	D 0.165	B 1.100	D 0.320	B 3.100	B 0.0000
JUL 11,84	JUL 10,84	G 2.05	0.50	G 0.355	G 0.375	0.290	G 2.650	0.0851
JUL 16,84	JUL 15,84	0.37	0.14	0.075	0.035	<W 0.005	0.840	0.1175
JUL 18,84	JUL 17,84	0.25	0.08	0.065	0.020	<W 0.005	0.330	0.0437
JUL 19,84	JUL 18,84	*****	*****	*****	*****	*****	*****	*****
JUL 24,84	JUL 23,84	*****	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	G 2.80	G 0.82	G 0.875	G 0.320	0.315	0.840	0.1445
AUG 3,84	AUG 2,84	G 2.10	0.36	G 0.370	D 0.160	0.140	1.550	0.0275
AUG 7,84	AUG 6,84	*****	*****	*****	*****	*****	*****	*****
AUG 9,84	AUG 8,84	0.44	0.28	0.125	0.070	0.070	0.935	0.1349
AUG 13,84	AUG 12,84	0.64	0.14	0.165	0.060	<T 0.010	0.645	G 0.0002
AUG 19,84	AUG 18,84	0.84	0.15	0.135	0.025	<T 0.005	0.510	0.0155

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 28,84	AUG 27,84	800 800	**** ****	1	2.6	1	63204	2	1	42	A N
AUG 29,84	AUG 28,84	800 800	**** ****	1	27.8	1	63205	2	1	104	AC
AUG 30,84	AUG 29,84	800 800	**** ****	1	23.8	1	63206	2	1	28	C N
SEP 2,84	SEP 1,84	800 800	1830 2000	1	25.2	1	63209	2	1	94	
SEP 3,84	SEP 2,84	800 800	**** ****	1	14.6	1	63210	2	1	100	
SEP 5,84	SEP 4,84	800 800	**** ****	1	3.4	1	63211	2	1	93	C
SEP 10,84	SEP 9,84	800 800	**** ****	1	33.2	1	63212	2	1	106	C
SEP 11,84	SEP 10,84	800 800	**** ****	1	1.4	1	63213	2	1	66	
SEP 12,84	SEP 11,84	800 800	**** ****	1	23.6	1	63214	2	1	101	C M
SEP 14,84	SEP 13,84	800 800	800 100	1	14.8	1	63215	2	1	83	
SEP 15,84	SEP 14,84	800 800	2200 330	1	2.6	1	63216	2	1	60	
SEP 16,84	SEP 15,84	800 1200	**** ****	1	1.3	1	63217	2	1	****	E
SEP 24,84	SEP 23,84	800 800	**** ****	1	2.0	1	63218	2	1	65	
SEP 25,84	SEP 24,84	800 800	2400 730	1	1.0	1	63219	2	1	54	
SEP 26,84	SEP 25,84	800 800	400 1800	1	14.0	1	63220	2	1	29	N
SEP 29,84	SEP 28,84	800 800	2300 2400	1	0.6	1	63221	2	1	****	FE
OCT 8,84	OCT 7,84	800 800	2000 800	1	6.2	1	63222	2	1	75	C
OCT 9,84	OCT 8,84	800 800	800 400	1	1.0	1	63223	2	1	59	C
OCT 17,84	OCT 16,84	800 800	830 900	1	1.0	1	63225	2	1	70	
OCT 18,84	OCT 17,84	800 800	800 1600	1	2.4	1	63226	2	1	95	
OCT 20,84	OCT 19,84	800 800	2000 100	1	4.6	1	63227	2	1	90	
OCT 22,84	OCT 21,84	800 800	**** ****	1	5.6	1	63228	2	1	96	
OCT 27,84	OCT 26,84	800 800	**** ****	1	4.0	1	63229	2	1	87	C
OCT 28,84	OCT 27,84	800 800	30 230	1	0.7	1	63230	2	1	35	C N
NOV 2,84	NOV 1,84	800 800	1300 100	1	12.0	1	63231	2	1	86	
NOV 5,84	NOV 4,84	800 800	830 600	1	26.0	1	63233	2	1	100	
NOV 6,84	NOV 5,84	800 800	**** ****	3	0.6	1	63236	2	1	38	N
NOV 9,84	NOV 8,84	800 800	30 800	1	0.6	1	63237	2	1	31	E N
NOV 10,84	NOV 9,84	800 800	800 800	1	16.8	1	63238	2	1	87	
NOV 11,84	NOV 10,84	800 800	800 800	1	12.0	1	63239	2	1	97	
NOV 12,84	NOV 11,84	800 800	800 100	3	2.0	1	63240	2	1	89	
NOV 15,84	NOV 14,84	800 800	100 800	1	7.0	1	63241	2	1	67	
NOV 16,84	NOV 15,84	800 800	800 600	3	****	1	63242	2	1	****	
NOV 18,84	NOV 17,84	800 800	100 500	2	****	1	63243	2	1	****	
NOV 20,84	NOV 19,84	800 800	1500 200	2	****	1	63244	2	1	****	E
NOV 29,84	NOV 28,84	800 800	100 700	1	6.2	2	63245	2	1	122	N
DEC 1,84	NOV 30,84	800 800	2100 800	3	3.8	2	63246	2	1	91	
DEC 2,84	DEC 1,84	800 800	800 1800	2	2.0	2	63247	2	1	63	C
DEC 3,84	DEC 2,84	800 800	100 600	2	6.4	2	63248	2	1	104	
DEC 5,84	DEC 4,84	800 800	200 400	2	0.1	2	63249	2	1	****	E

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 28,84	AUG 27,84	71.0	*****	*****	3.04	G 1.0960	0.00	0.00
AUG 29,84	AUG 28,84	1855.0	48.5	4.06	4.10	0.1064	5.40	0.58
AUG 30,84	AUG 29,84	441.0	39.6	*****	4.21	0.0876	4.65	0.59
SEP 2,84	SEP 1,84	1523.0	25.3	4.36	4.39	0.0592	2.70	0.40
SEP 3,84	SEP 2,84	943.0	32.2	4.26	4.31	0.0754	3.75	0.42
SEP 5,84	SEP 4,84	203.0	19.7	4.80	4.78	0.0386	4.25	0.09
SEP 10,84	SEP 9,84	2272.0	32.0	4.22	4.26	0.0800	3.35	0.36
SEP 11,84	SEP 10,84	60.0	*****	*****	4.37	0.0640	2.60	0.48
SEP 12,84	SEP 11,84	1541.0	17.8	4.40	4.49	0.0526	1.80	0.15
SEP 14,84	SEP 13,84	790.0	42.0	*****	4.11	D 0.0992	4.60	0.64
SEP 15,84	SEP 14,84	101.0	13.6	*****	G 5.05	0.0330	1.70	0.24
SEP 16,84	SEP 15,84	*****	*****	*****	*****	*****	*****	*****
SEP 24,84	SEP 23,84	84.0	*****	*****	4.54	0.0640	7.45	1.24
SEP 25,84	SEP 24,84	35.0	*****	*****	4.01	0.1468	13.00	2.08
SEP 26,84	SEP 25,84	267.0	22.6	*****	B 6.93	0.0276	4.45	0.58
SEP 29,84	SEP 28,84	*****	*****	*****	*****	*****	*****	*****
OCT 8,84	OCT 7,84	302.0	51.5	*****	4.23	0.0900	7.40	1.07
OCT 9,84	OCT 8,84	38.0	*****	*****	3.70	0.2400	G 13.80	1.94
OCT 17,84	OCT 16,84	45.0	*****	*****	3.62	G 0.3000	G 20.00	G 3.28
OCT 18,84	OCT 17,84	147.0	95.5	*****	3.76	0.2100	9.45	1.48
OCT 20,84	OCT 19,84	267.0	47.0	*****	4.02	0.1120	4.65	0.54
OCT 22,84	OCT 21,84	348.0	59.5	*****	3.92	0.1370	5.85	0.75
OCT 27,84	OCT 26,84	225.0	68.0	*****	3.89	0.1544	5.40	1.48
OCT 28,84	OCT 27,84	16.0	*****	*****	3.88	0.1702	*****	*****
NOV 2,84	NOV 1,84	666.0	28.5	*****	4.32	0.0720	3.05	0.51
NOV 5,84	NOV 4,84	1675.0	21.6	*****	4.38	0.0638	1.90	0.33
NOV 6,84	NOV 5,84	15.0	*****	*****	G 6.94	0.0208	*****	*****
NOV 9,84	NOV 8,84	12.0	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	943.0	42.3	*****	4.18	0.0968	3.90	0.73
NOV 11,84	NOV 10,84	751.0	38.5	*****	4.17	0.0934	2.75	0.84
NOV 12,84	NOV 11,84	115.0	27.6	*****	4.40	0.0614	3.30	0.40
NOV 15,84	NOV 14,84	305.0	19.7	*****	4.52	0.0500	2.05	0.29
NOV 16,84	NOV 15,84	414.0	31.1	*****	4.33	D 0.1326	3.30	0.50
NOV 18,84	NOV 17,84	62.0	33.0	*****	4.76	0.0470	4.10	1.19
NOV 20,84	NOV 19,84	3.0	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	487.0	20.9	*****	4.74	0.0442	2.95	0.42
DEC 1,84	NOV 30,84	222.0	35.0	*****	4.32	0.0782	2.45	1.05
DEC 2,84	DEC 1,84	82.0	23.7	*****	4.60	0.0504	3.00	0.52
DEC 3,84	DEC 2,84	428.0	33.4	*****	4.18	0.0918	1.80	0.68
DEC 5,84	DEC 4,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 28,84	AUG 27,84	*****	G 1.18	*****	*****	*****	G 2.650	0.9120
AUG 29,84	AUG 28,84	0.22	0.11	D 0.045	<T 0.010	<T 0.010	0.700	0.0794
AUG 30,84	AUG 29,84	0.32	0.11	0.070	0.035	0.030	0.720	0.0617
SEP 2,84	SEP 1,84	0.31	0.07	0.055	<W 0.005	0.035	0.280	0.0407
SEP 3,84	SEP 2,84	0.22	0.09	0.030	0.025	0.030	0.535	0.0490
SEP 5,84	SEP 4,84	0.42	0.08	0.100	0.030	0.035	0.670	0.0166
SEP 10,84	SEP 9,84	0.18	0.21	0.035	<W 0.005	0.130	0.280	0.0550
SEP 11,84	SEP 10,84	*****	0.20	*****	*****	*****	0.245	0.0427
SEP 12,84	SEP 11,84	<W 0.01	0.08	<W 0.005	<W 0.005	0.030	0.095	0.0324
SEP 14,84	SEP 13,84	0.61	0.29	0.060	0.115	0.350	0.435	0.0776
SEP 15,84	SEP 14,84	0.21	0.21	0.040	0.075	0.170	0.340	G 0.0089
SEP 16,84	SEP 15,84	*****	*****	*****	*****	*****	*****	*****
SEP 24,84	SEP 23,84	G 1.96	0.55	G 0.405	0.200	0.275	1.300	0.0288
SEP 25,84	SEP 24,84	*****	0.34	*****	*****	*****	*****	0.0977
SEP 26,84	SEP 25,84	*****	D 0.29	*****	*****	*****	*****	B 0.0001
SEP 29,84	SEP 28,84	*****	*****	*****	*****	*****	*****	*****
OCT 8,84	OCT 7,84	1.72	0.22	B 0.450	0.060	0.030	1.000	0.0589
OCT 9,84	OCT 8,84	*****	0.75	*****	*****	*****	*****	0.1995
OCT 17,84	OCT 16,84	*****	G 0.87	*****	*****	*****	G 4.250	0.2399
OCT 18,84	OCT 17,84	0.37	0.69	0.075	0.155	0.260	1.650	0.1738
OCT 20,84	OCT 19,84	0.36	0.29	0.070	0.075	0.145	0.430	0.0955
OCT 22,84	OCT 21,84	0.50	0.40	0.090	0.065	0.200	0.545	0.1202
OCT 27,84	OCT 26,84	0.51	0.36	0.125	0.045	0.040	0.880	0.1288
OCT 28,84	OCT 27,84	*****	*****	*****	*****	*****	*****	0.1318
NOV 2,84	NOV 1,84	0.37	0.13	0.065	0.040	0.020	0.430	0.0479
NOV 5,84	NOV 4,84	0.08	0.06	<W 0.005	<W 0.005	<W 0.005	0.270	0.0417
NOV 6,84	NOV 5,84	*****	*****	*****	*****	*****	*****	G 0.0001
NOV 9,84	NOV 8,84	*****	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	0.35	0.37	0.040	0.040	0.180	0.580	0.0661
NOV 11,84	NOV 10,84	0.13	0.12	0.010	<T 0.010	0.015	0.550	0.0676
NOV 12,84	NOV 11,84	0.60	0.25	0.125	0.115	0.160	0.285	0.0398
NOV 15,84	NOV 14,84	0.10	0.13	<W 0.005	0.055	0.070	0.385	0.0302
NOV 16,84	NOV 15,84	0.37	0.21	0.060	0.065	0.080	0.555	0.0468
NOV 18,84	NOV 17,84	*****	0.31	*****	*****	*****	1.250	0.0174
NOV 20,84	NOV 19,84	*****	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	D 0.60	0.21	D 0.160	<T 0.010	0.080	0.540	0.0182
DEC 1,84	NOV 30,84	0.45	0.29	0.055	0.130	0.105	0.775	0.0479
DEC 2,84	DEC 1,84	0.22	0.14	0.025	0.045	0.045	1.000	0.0251
DEC 3,84	DEC 2,84	0.23	0.17	0.010	<T 0.010	0.020	0.230	0.0661
DEC 5,84	DEC 4,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
DEC 6,84	DEC 5,84	800 800	100 800	2	5.6	2	63250	2	1	85	H
DEC 7,84	DEC 6,84	800 800	800 1000	1	0.4	2	63251	2	1	156	N
DEC 11,84	DEC 10,84	800 800	**** ****	1	1.6	2	63252	2	1	108	
DEC 13,84	DEC 12,84	800 800	900 100	1	7.2	2	63253	2	1	93	
DEC 17,84	DEC 16,84	800 800	**** ****	1	1.4	2	63254	2	1	275	NH
DEC 20,84	DEC 19,84	800 800	900 200	2	6.4	2	63255	2	1	78	
DEC 22,84	DEC 21,84	800 800	1300 800	1	20.8	2	63256	2	1	107	
DEC 24,84	DEC 23,84	800 800	100 700	2	1.8	2	63257	2	1	52	
DEC 25,84	DEC 24,84	800 800	1600 800	2	1.2	2	63258	2	1	23	N
DEC 26,84	DEC 25,84	800 800	800 1100	2	0.1	2	63259	2	1	****	EK
DEC 28,84	DEC 27,84	800 800	**** ****	1	5.0	2	63260	2	1	83	H
DEC 29,84	DEC 28,84	800 800	900 200	1	15.8	2	63261	2	1	98	CE
DEC 30,84	DEC 29,84	800 800	900 1700	1	13.0	2	63262	2	1	82	E

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
DEC 6,84	DEC 5,84	306.0	7.5	*****	B 5.50	0.0202	0.25	0.35
DEC 7,84	DEC 6,84	40.0	16.6	*****	G 5.96	0.0190	1.25	1.03
DEC 11,84	DEC 10,84	111.0	56.3	*****	4.08	0.1262	4.90	1.44
DEC 13,84	DEC 12,84	430.0	49.4	*****	4.09	0.1164	4.60	0.82
DEC 17,84	DEC 16,84	247.0	18.5	*****	4.87	0.0342	3.25	0.38
DEC 20,84	DEC 19,84	323.0	6.6	*****	B 5.29	0.0236	0.45	0.21
DEC 22,84	DEC 21,84	1432.0	17.1	*****	4.47	0.0536	1.50	0.16
DEC 24,84	DEC 23,84	60.0	49.6	*****	4.19	0.1020	5.00	1.40
DEC 25,84	DEC 24,84	18.0	*****	*****	B 6.62	0.0180	*****	*****
DEC 26,84	DEC 25,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	267.0	9.3	*****	B 6.00	0.0194	0.75	0.30
DEC 29,84	DEC 28,84	993.0	*****	*****	*****	*****	*****	*****
DEC 30,84	DEC 29,84	689.0	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NORTH EASTHOPE/DAILY/AEROCHEM #03

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
DEC 6,84	DEC 5,84	0.42	0.09	0.090	<W 0.005	<T 0.010	0.105	B 0.0032
DEC 7,84	DEC 6,84	*****	0.32	*****	*****	*****	*****	G 0.0011
DEC 11,84	DEC 10,84	G 1.41	0.58	G 0.250	0.050	0.330	0.450	0.0832
DEC 13,84	DEC 12,84	0.31	0.33	0.020	0.075	0.130	0.910	0.0813
DEC 17,84	DEC 16,84	0.95	0.20	G 0.325	0.040	0.090	0.225	0.0135
DEC 20,84	DEC 19,84	0.15	0.19	0.035	0.080	0.095	0.105	B 0.0051
DEC 22,84	DEC 21,84	0.07	0.07	0.005	<W 0.005	<W 0.005	0.110	0.0339
DEC 24,84	DEC 23,84	*****	0.25	*****	*****	*****	G 1.800	0.0646
DEC 25,84	DEC 24,84	*****	*****	*****	*****	*****	*****	B 0.0002
DEC 26,84	DEC 25,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	0.64	0.56	0.155	<W 0.005	D 0.295	0.065	B 0.0010
DEC 29,84	DEC 28,84	*****	*****	*****	*****	*****	*****	*****
DEC 30,84	DEC 29,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WELLESLEY/DAILY/AEROCHEM

#04

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	530 530	2300 400	2	1.6	2	18967	2	1	32	N
JAN 5,84	JAN 4,84	530 530	2000 300	2	0.9	2	18968	2	1	****	EIK
JAN 6,84	JAN 5,84	530 530	1400 2400	2	4.6	2	18969	2	1	43	N
JAN 8,84	JAN 7,84	530 530	****	2	3.4	2	18970	2	1	50	
JAN 9,84	JAN 8,84	530 530	****	2	1.3	2	18971	2	1	****	EIK
JAN 14,84	JAN 13,84	530 1030	****	2	3.6	2	18972	2	1	****	EIK
JAN 16,84	JAN 15,84	530 530	****	2	0.5	2	18973	2	1	U 49	EIK
JAN 17,84	JAN 16,84	530 530	530 700	2	0.8	2	18974	2	1	33	N
JAN 20,84	JAN 19,84	530 530	1800 2200	2	1.2	2	18975	2	1	48	CD N
JAN 24,84	JAN 23,84	530 530	1800 500	2	7.2	2	18976	2	1	64	
JAN 27,84	JAN 26,84	530 1200	****	2	10.2	2	18977	2	1	****	IE
JAN 29,84	JAN 28,84	830 830	****	2	3.6	2	18978	2	1	U 20	IE
JAN 31,84	JAN 30,84	530 530	****	2	1.8	2	18979	2	1	16	N
FEB 4,84	FEB 3,84	530 1000	1100 1400	3	3.8	2	18980	2	1	108	
FEB 5,84	FEB 4,84	1000 1200	1400 1730	2	1.8	2	18981	2	1	15	N
FEB 12,84	FEB 11,84	1130 1130	1300 2400	1	5.2	2	18982	2	1	101	
FEB 14,84	FEB 13,84	530 530	1000 2400	1	35.2	2	18983	2	1	77	
FEB 20,84	FEB 19,84	**** 530	****	3	1.7	2	18986	2	1	14	N
FEB 21,84	FEB 20,84	530 530	2200 400	2	2.3	2	18987	2	1	67	D HM
FEB 25,84	FEB 24,84	530 830	2300 600	2	7.5	2	18989	2	1	25	N
FEB 28,84	FEB 27,84	530 530	2030 430	2	4.9	2	18990	2	1	****	EIK
FEB 29,84	FEB 28,84	530 1530	1000 1400	2	8.0	2	18991	2	1	****	EIK
MAR 2,84	MAR 1,84	530 830	****	2	2.8	2	18992	2	1	16	C N
MAR 5,84	MAR 4,84	530 530	****	2	4.4	2	18993	2	1	20	C N
MAR 6,84	MAR 5,84	530 530	530 1200	2	10.0	2	18994	2	1	56	
MAR 11,84	MAR 10,84	530 530	2000 530	2	2.8	2	18995	2	1	23	C N
MAR 12,84	MAR 11,84	530 530	530 1000	2	1.5	2	18996	2	1	****	EIK
MAR 13,84	MAR 12,84	530 530	****	2	3.2	2	18997	2	1	****	EIK
MAR 16,84	MAR 15,84	530 530	2000 530	1	10.5	2	18998	2	1	99	
MAR 17,84	MAR 16,84	530 1000	****	1	18.2	2	18999	2	1	35	N
MAR 21,84	MAR 20,84	530 530	100 530	1	3.2	2	62002	2	1	78	C
MAR 22,84	MAR 21,84	530 530	530 530	3	10.6	2	62003	2	1	66	C
MAR 23,84	MAR 22,84	530 530	****	1	4.1	2	62004	2	1	24	N
MAR 30,84	MAR 29,84	530 530	2000 530	2	2.7	2	62005	2	1	35	N
APR 5,84	APR 4,84	500 500	****	1	9.1	2	62006	2	1	81	H
APR 7,84	APR 6,84	530 1200	1400 2000	1	4.9	2	62007	2	1	64	
APR 13,84	APR 12,84	530 530	300 530	1	2.8	1	62009	2	1	8	N
APR 14,84	APR 13,84	530 530	530 900	1	1.3	1	62010	2	1	16	N
APR 15,84	APR 14,84	530 800	2200 400	1	9.1	1	62011	2	1	102	C
APR 16,84	APR 15,84	800 530	****	1	1.5	1	62012	2	1	49	C N



ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	33.0	*****	*****	4.21	0.0864	1.40	0.77
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	127.0	39.1	*****	4.17	0.0964	2.60	1.03
JAN 8,84	JAN 7,84	111.0	20.0	*****	4.45	0.0564	0.40	0.62
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 16,84	JAN 15,84	16.0	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	17.0	*****	*****	4.06	0.1200	*****	*****
JAN 20,84	JAN 19,84	37.0	*****	*****	4.19	0.0972	1.80	1.65
JAN 24,84	JAN 23,84	296.0	17.3	*****	4.52	*****	0.75	0.33
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	*****
JAN 29,84	JAN 28,84	47.0	*****	*****	*****	*****	*****	*****
JAN 31,84	JAN 30,84	19.0	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 3,84	264.0	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	18.0	*****	*****	*****	*****	*****	*****
FEB 12,84	FEB 11,84	337.0	35.8	3.93	4.12	0.0980	2.60	0.60
FEB 14,84	FEB 13,84	1758.0	15.5	4.28	4.52	0.0504	1.15	0.22
FEB 20,84	FEB 19,84	16.0	*****	*****	4.18	0.0926	*****	*****
FEB 21,84	FEB 20,84	100.0	44.1	*****	4.09	0.1268	5.05	0.70
FEB 25,84	FEB 24,84	124.0	21.2	*****	4.44	0.0598	0.90	0.65
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 2,84	MAR 1,84	29.0	*****	*****	G 7.74	0.0134	0.95	0.16
MAR 5,84	MAR 4,84	58.0	*****	*****	D 4.46	0.0554	1.50	0.50
MAR 6,84	MAR 5,84	365.0	15.4	4.46	4.55	0.0490	1.60	0.31
MAR 11,84	MAR 10,84	43.0	*****	*****	4.42	0.0776	*****	*****
MAR 12,84	MAR 11,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	671.0	41.2	4.07	4.12	D 0.1130	3.45	0.52
MAR 17,84	MAR 16,84	409.0	17.5	*****	4.48	0.0622	1.15	0.24
MAR 21,84	MAR 20,84	162.0	G 90.2	*****	3.77	0.2260	7.45	D 1.50
MAR 22,84	MAR 21,84	455.0	33.7	4.18	4.21	0.0894	2.70	0.54
MAR 23,84	MAR 22,84	65.0	*****	*****	4.13	0.1062	3.00	0.68
MAR 30,84	MAR 29,84	61.0	*****	*****	*****	0.0160	0.40	0.22
APR 5,84	APR 4,84	475.0	6.5	G 5.07	G 5.22	0.0252	0.60	0.20
APR 7,84	APR 6,84	204.0	17.9	*****	4.51	0.0512	1.60	0.33
APR 13,84	APR 12,84	15.0	*****	*****	3.65	G 0.2780	*****	*****
APR 14,84	APR 13,84	14.0	*****	*****	3.91	0.1642	*****	*****
APR 15,84	APR 14,84	595.0	44.0	4.07	4.09	0.1174	3.10	1.04
APR 16,84	APR 15,84	48.0	*****	*****	3.77	0.2120	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	*****	0.39	*****	*****	*****	*****	0.0617
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	*****	0.26	*****	*****	*****	0.920	0.0676
JAN 8,84	JAN 7,84	*****	0.17	*****	*****	*****	0.190	0.0355
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 16,84	JAN 15,84	*****	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	0.0871
JAN 20,84	JAN 19,84	*****	G 2.80	*****	*****	*****	*****	0.0646
JAN 24,84	JAN 23,84	0.11	0.07	0.025	0.005	0.030	0.050	0.0302
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	*****
JAN 29,84	JAN 28,84	*****	*****	*****	*****	*****	*****	*****
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 3,84	*****	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 12,84	FEB 11,84	0.14	0.18	0.015	<T 0.010	0.065	0.210	0.0759
FEB 14,84	FEB 13,84	0.03	0.07	0.005	<W 0.005	0.040	0.110	0.0302
FEB 20,84	FEB 19,84	*****	*****	*****	*****	*****	*****	0.0661
FEB 21,84	FEB 20,84	0.38	0.28	0.045	<W 0.005	0.110	0.086	0.0813
FEB 25,84	FEB 24,84	0.14	0.08	0.025	<W 0.005	0.015	0.210	0.0363
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 2,84	MAR 1,84	*****	0.22	*****	*****	*****	*****	G 0.0000
MAR 5,84	MAR 4,84	*****	0.15	*****	*****	*****	0.120	D 0.0347
MAR 6,84	MAR 5,84	0.10	0.11	0.015	<T 0.010	0.020	0.326	0.0282
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	<W 0.002	0.0380
MAR 12,84	MAR 11,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	0.20	0.18	0.035	0.020	0.065	0.142	0.0759
MAR 17,84	MAR 16,84	0.04	0.03	0.005	<T 0.005	<T 0.005	0.128	0.0331
MAR 21,84	MAR 20,84	0.72	0.79	0.130	0.045	0.260	0.620	0.1698
MAR 22,84	MAR 21,84	0.12	0.25	0.035	<T 0.010	0.095	0.230	0.0617
MAR 23,84	MAR 22,84	*****	0.14	*****	*****	*****	0.320	0.0741
MAR 30,84	MAR 29,84	*****	0.18	*****	*****	*****	0.302	*****
APR 5,84	APR 4,84	0.07	0.04	0.010	<W 0.005	0.015	0.186	G 0.0060
APR 7,84	APR 6,84	0.06	0.04	0.010	<W 0.005	0.020	0.234	0.0309
APR 13,84	APR 12,84	*****	*****	*****	*****	*****	*****	0.2239
APR 14,84	APR 13,84	*****	*****	*****	*****	*****	*****	0.1230
APR 15,84	APR 14,84	0.42	0.21	0.050	0.025	0.040	0.440	0.0813
APR 16,84	APR 15,84	*****	*****	*****	*****	*****	0.540	0.1698

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
APR 17,84	APR 16,84	530 500	2400 500	3	3.2	1	62013	2	1	58	
APR 18,84	APR 17,84	500 530	500 700	3	3.1	1	62014	2	1	47	N
APR 19,84	APR 18,84	530 530	700 1000	1	1.5	1	62015	2	1	32	N
APR 23,84	APR 22,84	530 530	2200 400	1	5.2	1	62016	2	1	82	
MAY 1,84	APR 30,84	530 530	600 900	1	2.1	1	62017	2	1	83	Q
MAY 3,84	MAY 2,84	530 530	2200 300	1	0.9	1	62018	2	1	52	C
MAY 4,84	MAY 3,84	530 530	2000 500	1	1.3	1	62019	2	1	16	N
MAY 8,84	MAY 7,84	530 530	**** 400	1	0.8	1	62020	2	1	87	
MAY 9,84	MAY 8,84	530 530	800 1130	1	6.8	1	62021	2	1	91	
MAY 13,84	MAY 12,84	830 830	2400 300	1	1.9	1	62022	2	1	59	CD
MAY 14,84	MAY 13,84	830 530	1300 1730	2	13.2	1	62023	2	1	55	JHCM
MAY 18,84	MAY 17,84	530 530	2400 530	1	3.1	1	62026	2	1	96	C
MAY 19,84	MAY 18,84	530 530	530 1100	1	4.8	1	62027	2	1	83	C
MAY 22,84	MAY 21,84	530 530	2400 530	1	2.7	1	62028	2	1	292	N
MAY 23,84	MAY 22,84	530 530	100 430	1	17.2	1	62029	2	1	97	
MAY 24,84	MAY 23,84	530 530	1400 1500	3	9.3	1	62030	2	1	90	C
MAY 29,84	MAY 28,84	530 530	2400 400	1	21.3	1	62033	2	1	97	
MAY 30,84	MAY 29,84	530 530	**** ****	1	1.4	1	62036	2	1	25	N
JUN 3,84	JUN 2,84	530 1100	2300 400	1	16.7	1	62037	2	1	99	
JUN 7,84	JUN 6,84	530 530	1730 1930	1	5.5	1	62038	2	1	94	A
JUN 10,84	JUN 9,84	830 830	2000 2100	1	3.6	1	62039	2	1	93	C
JUN 17,84	JUN 16,84	1630 1100	700 1100	1	23.6	1	62040	2	1	128	N
JUN 18,84	JUN 17,84	1100 530	2130 400	1	28.3	1	62043	2	1	79	
JUN 25,84	JUN 23,84	1500 530	2200 2300	1	4.3	1	62044	2	1	88	Z
JUN 26,84	JUN 25,84	530 800	2300 400	1	17.8	1	62031	2	1	112	A
JUN 28,84	JUN 27,84	530 530	1000 1200	1	7.1	1	62045	2	1	97	C
JUL 4,84	JUL 3,84	530 530	200 400	1	0.8	1	62046	2	1	44	N
JUL 6,84	JUL 5,84	530 530	1630 1830	1	4.0	1	62047	2	1	95	
JUL 7,84	JUL 6,84	530 500	900 1130	1	23.3	1	62048	2	1	102	
JUL 11,84	JUL 10,84	530 530	2400 300	1	3.0	1	62051	2	1	112	
JUL 16,84	JUL 15,84	530 830	1800 2030	1	12.6	1	62052	2	1	93	
JUL 18,84	JUL 17,84	530 1200	1830 2200	1	25.8	1	62053	2	1	102	
AUG 2,84	AUG 1,84	530 530	230 430	1	23.8	1	62054	2	1	101	
AUG 3,84	AUG 2,84	530 530	1930 2000	1	2.5	1	62057	2	1	76	
AUG 7,84	AUG 6,84	530 530	2400 300	1	2.8	1	62058	2	1	70	C
AUG 9,84	AUG 8,84	530 530	2200 100	1	14.0	1	62059	2	1	104	
AUG 13,84	AUG 12,84	530 530	1930 2000	1	1.0	1	62060	2	1	59	C
AUG 19,84	AUG 18,84	830 1100	1330 1600	1	4.3	1	62061	2	1	98	D
AUG 23,84	AUG 22,84	530 530	1330 1730	1	3.5	1	62062	2	1	90	C
AUG 29,84	AUG 28,84	530 530	2400 430	1	35.8	1	62063	2	1	99	C

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 17,84	APR 16,84	120.0	10.2	*****	4.75	0.0448	1.15	0.30
APR 18,84	APR 17,84	94.0	*****	*****	G 5.06	0.0322	0.85	0.17
APR 19,84	APR 18,84	31.0	*****	*****	3.73	G 0.2580	*****	*****
APR 23,84	APR 22,84	276.0	14.5	4.57	4.60	0.0488	1.35	0.16
MAY 1,84	APR 30,84	112.0	29.0	*****	4.50	0.0670	4.15	0.53
MAY 3,84	MAY 2,84	30.0	*****	*****	G 5.51	0.0310	*****	*****
MAY 4,84	MAY 3,84	14.0	*****	*****	G 5.52	0.0254	*****	*****
MAY 8,84	MAY 7,84	45.0	*****	*****	4.13	0.1554	> 10.00	> 2.00
MAY 9,84	MAY 8,84	401.0	24.0	4.43	4.64	0.0526	3.15	0.58
MAY 13,84	MAY 12,84	73.0	*****	*****	G 5.11	0.0456	8.90	1.48
MAY 14,84	MAY 13,84	471.0	4.3	G 5.44	G 5.98	0.0204	0.45	0.09
MAY 18,84	MAY 17,84	192.0	32.5	4.20	4.30	0.0806	3.75	0.62
MAY 19,84	MAY 18,84	256.0	36.0	*****	4.28	0.0800	4.35	0.76
MAY 22,84	MAY 21,84	507.0	32.0	4.15	4.21	0.0832	3.30	0.39
MAY 23,84	MAY 22,84	1076.0	12.1	4.71	4.74	0.0370	1.25	0.22
MAY 24,84	MAY 23,84	538.0	7.1	G 6.10	B 6.31	0.0204	0.95	0.18
MAY 29,84	MAY 28,84	1332.0	17.2	4.36	4.46	0.0540	2.00	0.13
MAY 30,84	MAY 29,84	23.0	*****	*****	4.66	0.0474	*****	*****
JUN 3,84	JUN 2,84	1062.0	15.4	4.47	4.61	0.0434	1.95	0.25
JUN 7,84	JUN 6,84	333.0	23.6	4.35	4.47	0.0538	2.25	0.47
JUN 10,84	JUN 9,84	216.0	36.5	4.12	4.31	0.0706	5.35	0.71
JUN 17,84	JUN 16,84	1938.0	27.0	4.09	4.18	0.0840	2.45	0.29
JUN 18,84	JUN 17,84	1443.0	37.5	4.01	4.10	0.0924	3.90	0.52
JUN 25,84	JUN 23,84	243.0	39.3	4.05	4.06	0.1050	3.50	0.62
JUN 26,84	JUN 25,84	1285.0	9.0	4.65	4.72	0.0384	1.10	0.18
JUN 28,84	JUN 27,84	442.0	34.2	4.15	4.18	0.0874	4.10	0.41
JUL 4,84	JUL 3,84	23.0	*****	*****	*****	*****	G 31.50	G 3.90
JUL 6,84	JUL 5,84	244.0	12.3	4.58	4.73	0.0344	1.20	0.31
JUL 7,84	JUL 6,84	1536.0	12.8	4.58	4.71	0.0368	1.50	0.19
JUL 11,84	JUL 10,84	216.0	43.5	4.09	4.19	0.0928	5.25	0.93
JUL 16,84	JUL 15,84	758.0	65.8	3.82	3.89	D 0.1500	7.25	0.64
JUL 18,84	JUL 17,84	1690.0	25.4	4.24	4.36	0.0618	2.55	0.48
AUG 2,84	AUG 1,84	1547.0	53.3	3.84	3.93	0.1338	4.75	0.77
AUG 3,84	AUG 2,84	122.0	25.7	*****	G 6.65	0.0226	5.70	0.67
AUG 7,84	AUG 6,84	127.0	72.0	*****	3.94	0.1584	8.25	0.98
AUG 9,84	AUG 8,84	936.0	44.0	4.07	4.13	0.1068	4.10	0.53
AUG 13,84	AUG 12,84	38.0	*****	*****	G 7.38	0.0196	3.70	0.75
AUG 19,84	AUG 18,84	271.0	19.9	4.52	4.69	0.0446	2.90	0.41
AUG 23,84	AUG 22,84	203.0	> 100.0	3.33	3.35	G 0.5376	G 22.70	G 2.44
AUG 29,84	AUG 28,84	2289.0	48.5	4.06	4.05	0.1158	5.05	0.50

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 17,84	APR 16,84	0.15	0.05	0.020	<T 0.000	0.050	0.480	0.0178
APR 18,84	APR 17,84	0.15	0.08	0.025	<T 0.005	0.080	0.180	G 0.0087
APR 19,84	APR 18,84	*****	*****	*****	*****	*****	*****	0.1862
APR 23,84	APR 22,84	0.10	0.04	0.015	<W 0.005	0.045	0.075	0.0251
MAY 1,84	APR 30,84	0.71	0.31	0.115	0.100	0.180	0.730	0.0316
MAY 3,84	MAY 2,84	*****	*****	*****	*****	*****	*****	G 0.0031
MAY 4,84	MAY 3,84	*****	*****	*****	*****	*****	*****	G 0.0030
MAY 8,84	MAY 7,84	*****	0.74	*****	*****	*****	*****	0.0741
MAY 9,84	MAY 8,84	0.42	0.12	0.095	0.035	0.060	0.820	0.0229
MAY 13,84	MAY 12,84	*****	0.39	*****	*****	*****	1.750	G 0.0078
MAY 14,84	MAY 13,84	0.04	0.05	<W 0.005	<W 0.005	<T 0.005	0.185	G 0.0010
MAY 18,84	MAY 17,84	0.60	0.22	0.175	0.030	0.040	0.515	0.0501
MAY 19,84	MAY 18,84	0.80	0.18	0.150	0.020	0.045	0.620	0.0525
MAY 22,84	MAY 21,84	0.11	0.14	0.030	<W 0.005	0.050	0.350	0.0617
MAY 23,84	MAY 22,84	0.06	0.07	0.010	<W 0.005	<T 0.010	0.265	0.0182
MAY 24,84	MAY 23,84	0.09	0.04	0.025	<T 0.010	0.020	0.600	B 0.0005
MAY 29,84	MAY 28,84	0.05	0.04	<W 0.005	<W 0.005	<W 0.005	0.190	0.0347
MAY 30,84	MAY 29,84	*****	*****	*****	*****	*****	*****	0.0219
JUN 3,84	JUN 2,84	0.22	0.06	0.045	<T 0.015	<T 0.005	0.300	0.0245
JUN 7,84	JUN 6,84	0.57	0.17	0.120	0.040	0.050	0.295	0.0339
JUN 10,84	JUN 9,84	0.79	0.22	0.165	0.040	0.070	1.000	0.0490
JUN 17,84	JUN 16,84	0.03	0.08	0.005	0.005	0.005	0.160	0.0661
JUN 18,84	JUN 17,84	0.19	0.18	0.035	0.055	0.045	0.650	0.0794
JUN 25,84	JUN 23,84	0.16	0.09	0.040	<T 0.005	<T 0.005	0.275	0.0871
JUN 26,84	JUN 25,84	0.10	0.04	0.030	<T 0.005	<W 0.005	0.115	0.0191
JUN 28,84	JUN 27,84	0.22	0.10	0.045	0.025	<T 0.005	0.525	0.0661
JUL 4,84	JUL 3,84	*****	G 0.85	*****	*****	*****	*****	*****
JUL 6,84	JUL 5,84	0.15	0.05	0.040	<W 0.005	<T 0.010	0.250	0.0186
JUL 7,84	JUL 6,84	0.06	0.03	0.015	<W 0.005	<W 0.005	0.280	0.0195
JUL 11,84	JUL 10,84	0.59	0.19	0.120	0.050	0.080	1.100	0.0646
JUL 16,84	JUL 15,84	0.25	0.13	0.055	0.020	0.020	0.800	0.1288
JUL 18,84	JUL 17,84	0.25	0.07	0.070	<T 0.010	<W 0.005	0.385	0.0437
AUG 2,84	AUG 1,84	0.31	0.13	0.075	0.015	0.040	0.315	0.1175
AUG 3,84	AUG 2,84	1.75	0.20	G 0.410	0.035	0.090	1.050	G 0.0002
AUG 7,84	AUG 6,84	1.04	0.30	0.245	0.045	0.110	0.715	0.1148
AUG 9,84	AUG 8,84	0.12	0.14	0.020	<W 0.005	<T 0.010	0.375	0.0741
AUG 13,84	AUG 12,84	*****	0.34	*****	*****	*****	*****	G 0.0000
AUG 19,84	AUG 18,84	0.43	0.12	0.090	<T 0.005	<W 0.005	0.470	0.0204
AUG 23,84	AUG 22,84	1.14	0.50	0.150	0.045	<T 0.010	0.935	0.4467
AUG 29,84	AUG 28,84	0.12	0.10	0.030	<W 0.005	<W 0.005	0.555	0.0891

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 30,84	AUG 29,84	530 530	800 1600	1	7.2	1	62064	2	1	166	CD N
AUG 31,84	AUG 30,84	530 530	****	1	15.5	1	62065	2	1	98	
SEP 2,84	SEP 1,84	800 1100	****	1	14.5	1	62066	2	1	46	N
SEP 3,84	SEP 2,84	1100 830	****	1	18.1	1	62067	2	1	37	N
SEP 10,84	SEP 9,84	530 530	130 400	1	24.5	1	62068	2	1	110	A
SEP 12,84	SEP 11,84	530 530	1030 1200	1	22.0	1	62069	2	1	100	
SEP 14,84	SEP 13,84	530 530	800 1200	1	16.6	1	62070	2	1	101	
SEP 16,84	SEP 15,84	530 1100	****	1	3.4	1	62071	2	1	102	C
SEP 23,84	SEP 22,84	830 930	200 400	1	0.9	1	62073	2	1	24	N
SEP 24,84	SEP 23,84	930 530	100 400	1	2.2	1	62074	2	1	52	
SEP 25,84	SEP 24,84	530 530	800 1500	1	1.2	1	62075	2	1	55	
SEP 26,84	SEP 25,84	530 530	1830 2000	1	11.8	1	62076	2	1	96	
OCT 8,84	OCT 7,84	830 1000	****	1	4.3	1	62077	2	1	83	
OCT 9,84	OCT 8,84	1000 530	1000 100	1	2.2	1	62078	2	1	80	
OCT 10,84	OCT 9,84	530 530	1000 1400	1	4.1	1	62079	2	1	94	
OCT 15,84	OCT 14,84	530 530	900 1000	1	1.5	1	62080	2	1	62	
OCT 18,84	OCT 17,84	530 530	1600 1530	1	3.8	1	62081	2	1	91	
OCT 20,84	OCT 19,84	530 830	1300 1530	1	8.5	1	62082	2	1	98	
OCT 21,84	OCT 20,84	830 800	100 800	1	4.4	1	62083	2	1	88	
OCT 22,84	OCT 21,84	800 530	800 900	1	2.3	1	62084	2	1	88	
OCT 26,84	OCT 25,84	530 530	2300 430	1	5.3	1	62085	2	1	89	D
NOV 2,84	NOV 1,84	530 530	1400 2200	1	9.3	1	62086	2	1	92	
NOV 4,84	NOV 3,84	530 530	100 400	1	1.1	1	62087	2	1	58	
NOV 5,84	NOV 4,84	800 530	830 1230	1	23.3	1	62088	2	1	98	HM
NOV 9,84	NOV 8,84	530 530	2300 100	1	1.0	1	62089	2	1	53	
NOV 10,84	NOV 9,84	530 530	1630 400	1	13.5	1	62090	2	1	97	
NOV 11,84	NOV 10,84	830 1030	930 400	1	16.7	1	62093	2	1	96	A
NOV 12,84	NOV 11,84	1030 530	1100 1300	3	3.9	1	62094	2	1	77	
NOV 16,84	NOV 15,84	530 530	530 1500	1	10.5	1	62095	2	1	98	
NOV 18,84	NOV 17,84	830 1130	730 1130	3	0.8	1	62096	2	1	40	N
NOV 28,84	NOV 27,84	530 530	200 400	1	0.1	2	62097	2	1	****	E
NOV 29,84	NOV 28,84	530 530	1000 1330	1	7.4	2	62098	2	1	85	
DEC 1,84	NOV 30,84	530 800	****	1	2.2	2	62099	2	1	80	
DEC 2,84	DEC 1,84	800 1130	900 1030	3	2.7	2	62100	2	1	****	EF
DEC 3,84	DEC 2,84	1130 530	300 530	3	7.6	2	62101	2	1	69	
DEC 4,84	DEC 3,84	530 530	530 ****	3	2.6	2	62102	2	1	101	
DEC 5,84	DEC 4,84	530 530	****	2	2.2	2	62103	2	1	****	EF
DEC 6,84	DEC 5,84	530 530	2300 530	2	4.3	2	62104	2	1	88	
DEC 7,84	DEC 6,84	530 530	530 1200	2	1.2	2	62105	2	1	U 45	F
DEC 12,84	DEC 11,84	530 530	****	1	1.5	2	62106	2	1	132	N



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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 30,84	AUG 29,84	768.0	33.9	4.26	4.28	0.0804	4.00	0.57
AUG 31,84	AUG 30,84	980.0	38.6	4.15	4.14	0.0976	3.95	0.53
SEP 2,84	SEP 1,84	428.0	15.9	*****	4.67	0.0392	2.00	0.36
SEP 3,84	SEP 2,84	433.0	D 52.9	4.05	4.03	D 0.1216	5.75	0.62
SEP 10,84	SEP 9,84	1729.0	27.8	4.29	4.28	0.0780	2.90	0.31
SEP 12,84	SEP 11,84	1415.0	12.5	4.74	4.56	0.0430	1.35	0.13
SEP 14,84	SEP 13,84	1078.0	38.7	*****	4.14	0.0990	4.05	0.56
SEP 16,84	SEP 15,84	224.0	9.9	*****	G 5.32	0.0268	1.20	0.17
SEP 23,84	SEP 22,84	14.0	*****	*****	G 7.18	0.0244	*****	*****
SEP 24,84	SEP 23,84	74.0	*****	*****	3.77	0.2060	8.45	1.84
SEP 25,84	SEP 24,84	43.0	*****	*****	4.63	0.0724	7.25	1.58
SEP 26,84	SEP 25,84	728.0	25.5	*****	4.35	0.0662	2.55	0.34
OCT 8,84	OCT 7,84	230.0	62.0	*****	3.96	0.1306	6.65	0.99
OCT 9,84	OCT 8,84	113.0	94.0	*****	3.73	0.2080	8.35	1.72
OCT 10,84	OCT 9,84	249.0	28.1	*****	4.35	0.0648	2.55	0.59
OCT 15,84	OCT 14,84	60.0	*****	*****	4.21	0.1050	9.90	1.40
OCT 18,84	OCT 17,84	223.0	88.0	*****	3.74	0.2000	8.55	1.24
OCT 20,84	OCT 19,84	537.0	31.0	*****	4.24	0.0782	2.90	0.30
OCT 21,84	OCT 20,84	251.0	87.0	*****	3.72	0.2060	8.30	D 0.99
OCT 22,84	OCT 21,84	131.0	19.6	*****	4.58	0.0514	2.20	0.29
OCT 26,84	OCT 25,84	305.0	50.6	*****	4.09	0.1170	3.90	0.92
NOV 2,84	NOV 1,84	551.0	21.8	*****	4.51	0.0526	2.45	0.36
NOV 4,84	NOV 3,84	41.0	34.5	*****	4.23	0.0884	3.95	0.81
NOV 5,84	NOV 4,84	1474.0	18.1	*****	4.43	0.0542	3.05	0.38
NOV 9,84	NOV 8,84	34.0	67.8	*****	4.02	0.1400	1.50	0.24
NOV 10,84	NOV 9,84	843.0	39.8	*****	4.17	0.0952	3.65	0.61
NOV 11,84	NOV 10,84	1032.0	31.6	*****	4.26	0.0802	2.35	0.66
NOV 12,84	NOV 11,84	195.0	23.1	*****	4.39	0.0614	2.15	0.39
NOV 16,84	NOV 15,84	665.0	31.2	*****	4.34	0.0768	3.05	0.53
NOV 18,84	NOV 17,84	21.0	*****	*****	4.15	0.1066	*****	*****
NOV 28,84	NOV 27,84	*****	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	406.0	28.9	*****	4.37	0.0732	2.95	0.43
DEC 1,84	NOV 30,84	114.0	39.7	*****	4.21	0.0910	2.10	1.29
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	*****
DEC 3,84	DEC 2,84	340.0	29.6	*****	4.26	0.0834	1.55	0.56
DEC 4,84	DEC 3,84	169.0	39.2	*****	4.15	0.0982	2.15	0.87
DEC 5,84	DEC 4,84	*****	*****	*****	*****	*****	*****	*****
DEC 6,84	DEC 5,84	244.0	9.2	*****	4.79	0.0326	0.15	0.31
DEC 7,84	DEC 6,84	35.0	25.4	*****	G 7.02	0.0172	1.45	1.06
DEC 12,84	DEC 11,84	127.0	34.5	*****	4.23	0.0970	2.50	0.53

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 30,84	AUG 29,84	0.32	0.10	0.070	0.025	0.030	0.650	0.0525
AUG 31,84	AUG 30,84	0.18	0.09	0.025	<W 0.005	0.025	0.445	0.0724
SEP 2,84	SEP 1,84	0.38	0.07	0.070	<W 0.005	<T 0.010	0.230	0.0214
SEP 3,84	SEP 2,84	0.31	0.16	0.045	<T 0.010	0.050	0.685	0.0933
SEP 10,84	SEP 9,84	0.03	0.19	0.020	<W 0.005	0.095	0.230	0.0525
SEP 12,84	SEP 11,84	<W 0.01	0.04	<W 0.005	<W 0.005	<W 0.005	0.090	0.0275
SEP 14,84	SEP 13,84	0.38	0.19	0.040	<T 0.010	0.120	0.395	0.0724
SEP 16,84	SEP 15,84	0.05	0.06	0.005	<W 0.005	0.050	0.390	G 0.0048
SEP 23,84	SEP 22,84	*****	*****	*****	*****	*****	*****	G 0.0001
SEP 24,84	SEP 23,84	*****	0.40	*****	*****	*****	G 2.000	0.1698
SEP 25,84	SEP 24,84	*****	0.23	*****	*****	*****	*****	0.0234
SEP 26,84	SEP 25,84	0.10	0.10	0.010	<T 0.010	0.055	0.345	0.0447
OCT 8,84	OCT 7,84	0.62	0.17	0.140	0.045	0.035	1.000	0.1096
OCT 9,84	OCT 8,84	0.20	0.29	0.025	0.025	0.085	1.650	0.1862
OCT 10,84	OCT 9,84	<T 0.02	0.07	0.010	0.025	0.025	0.695	0.0447
OCT 15,84	OCT 14,84	*****	0.27	*****	*****	*****	G 2.950	0.0617
OCT 18,84	OCT 17,84	0.39	0.43	0.060	0.040	0.130	1.250	0.1820
OCT 20,84	OCT 19,84	0.06	0.13	0.020	0.020	0.065	0.180	0.0575
OCT 21,84	OCT 20,84	0.49	0.56	0.110	0.065	0.315	0.580	0.1905
OCT 22,84	OCT 21,84	0.32	0.12	0.065	0.020	0.100	0.235	0.0263
OCT 26,84	OCT 25,84	0.23	0.19	0.060	0.045	0.015	0.650	0.0813
NOV 2,84	NOV 1,84	0.45	0.08	0.045	<T 0.010	<T 0.010	0.275	0.0309
NOV 4,84	NOV 3,84	*****	0.71	*****	*****	*****	0.145	0.0589
NOV 5,84	NOV 4,84	0.03	0.12	<W 0.005	<W 0.005	<W 0.005	0.155	0.0372
NOV 9,84	NOV 8,84	*****	0.03	*****	*****	*****	*****	0.0955
NOV 10,84	NOV 9,84	0.30	0.28	0.045	0.020	0.135	0.435	0.0676
NOV 11,84	NOV 10,84	0.12	0.11	0.005	<T 0.005	0.025	0.475	0.0550
NOV 12,84	NOV 11,84	0.13	0.05	0.010	0.020	0.025	0.360	0.0407
NOV 16,84	NOV 15,84	0.30	0.17	0.040	0.050	0.085	0.495	0.0457
NOV 18,84	NOV 17,84	*****	*****	*****	*****	*****	*****	0.0708
NOV 28,84	NOV 27,84	*****	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	0.04	D 0.22	0.020	0.025	D 0.095	0.555	0.0427
DEC 1,84	NOV 30,84	0.40	0.21	0.035	0.040	0.025	0.805	0.0617
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	*****
DEC 3,84	DEC 2,84	0.03	0.16	0.005	<W 0.005	<T 0.010	0.175	0.0550
DEC 4,84	DEC 3,84	0.06	0.16	0.010	<T 0.005	<W 0.005	0.440	0.0708
DEC 5,84	DEC 4,84	*****	*****	*****	*****	*****	*****	*****
DEC 6,84	DEC 5,84	0.06	0.07	0.015	<W 0.005	<W 0.005	0.035	0.0162
DEC 7,84	DEC 6,84	*****	G 1.28	*****	*****	*****	*****	G 0.0001
DEC 12,84	DEC 11,84	0.26	0.22	0.030	<W 0.005	0.045	0.210	0.0589



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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
DEC 13,84	DEC 12,84	530 530	1000 1200	1	7.1	2	62107	2	1	U 19	F
DEC 15,84	DEC 14,84	530 830	900 1400	3	4.6	2	62108	2	1	27	N
DEC 20,84	DEC 19,84	530 530	930 1200	2	6.0	2	62109	2	1	69	C
DEC 22,84	DEC 21,84	530 800	1300 1700	3	20.8	2	62110	2	1	100	
DEC 24,84	DEC 23,84	530 530	****	2	1.1	2	62113	2	1	****	IE
DEC 25,84	DEC 24,84	530 530	1000 1400	2	1.8	2	62114	2	1	22	N
DEC 27,84	DEC 26,84	530 530	****	2	3.3	2	62115	2	1	****	E
DEC 28,84	DEC 27,84	530 530	2300 300	3	4.1	2	62116	2	1	88	
DEC 29,84	DEC 28,84	530 830	****	1	7.7	2	62117	2	1	121	N
DEC 30,84	DEC 29,84	830 630	930 1300	1	9.7	2	62118	2	1	100	Q

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
DEC 13,84	DEC 12,84	87.0	48.0	*****	4.09	0.1122	4.30	0.81
DEC 15,84	DEC 14,84	81.0	49.9	*****	4.08	0.1240	4.60	0.69
DEC 20,84	DEC 19,84	268.0	7.5	*****	G 5.28	0.0236	0.60	0.18
DEC 22,84	DEC 21,84	1335.0	17.7	*****	4.50	0.0554	1.55	0.16
DEC 24,84	DEC 23,84	*****	*****	*****	*****	*****	*****	*****
DEC 25,84	DEC 24,84	26.0	*****	*****	4.71	D 0.0510	*****	*****
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	232.0	31.7	*****	4.25	0.0818	3.05	0.34
DEC 29,84	DEC 28,84	598.0	30.0	*****	4.43	0.0642	3.70	0.47
DEC 30,84	DEC 29,84	627.0	13.1	*****	4.82	0.0368	1.55	0.15

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
DEC 13,84	DEC 12,84	0.25	0.20	0.015	0.020	0.045	0.830	0.0813
DEC 15,84	DEC 14,84	0.30	0.37	0.050	0.020	0.140	0.400	0.0832
DEC 20,84	DEC 19,84	0.18	0.10	0.050	<W 0.005	<W 0.005	0.110	G 0.0052
DEC 22,84	DEC 21,84	0.07	0.08	0.015	<W 0.005	<W 0.005	0.075	0.0316
DEC 24,84	DEC 23,84	*****	*****	*****	*****	*****	*****	*****
DEC 25,84	DEC 24,84	*****	*****	*****	*****	*****	*****	0.0195
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	0.21	0.20	0.035	0.025	0.065	0.385	0.0562
DEC 29,84	DEC 28,84	0.19	0.40	0.070	0.055	0.285	0.815	0.0372
DEC 30,84	DEC 29,84	0.03	0.15	0.010	0.015	0.070	0.360	0.0151

**PART IV**

**CENTRAL REGION**

**DAILY PRECIPITATION CHEMISTRY LISTINGS**

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ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM #06

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	210.0	33.4	3.87	4.11	0.0964	0.50	1.15
JAN 3,84	JAN 2,84	14.0	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	54.0	*****	*****	4.45	0.0532	0.85	0.73
JAN 6,84	JAN 5,84	296.0	30.9	3.97	4.25	0.0764	1.55	0.73
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	53.0	*****	*****	4.45	0.0594	1.35	0.70
JAN 10,84	JAN 9,84	26.0	*****	*****	G 5.48	0.0214	0.60	<M 0.01
JAN 14,84	JAN 13,84	170.0	34.6	3.91	4.15	0.0858	0.45	1.03
JAN 15,84	JAN 14,84	1.0	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	1.0	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 17,84	3.0	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 20,84	23.0	*****	*****	G 7.20	0.0204	*****	*****
JAN 23,84	JAN 22,84	26.0	*****	*****	4.32	0.0886	*****	*****
JAN 24,84	JAN 23,84	415.0	16.4	4.23	4.61	0.0508	0.70	0.40
JAN 27,84	JAN 26,84	115.0	24.6	*****	G 5.21	0.0380	2.60	1.10
JAN 28,84	JAN 27,84	475.0	26.8	4.15	4.39	0.0742	1.25	0.88
JAN 30,84	JAN 29,84	28.0	*****	*****	4.28	0.0936	*****	*****
JAN 31,84	JAN 30,84	13.0	*****	*****	4.45	0.0434	*****	*****
FEB 3,84	FEB 2,84	137.0	57.5	*****	3.99	0.1552	2.75	1.42
FEB 4,84	FEB 3,84	59.0	*****	*****	4.26	0.1004	2.80	0.64
FEB 5,84	FEB 4,84	129.0	39.2	*****	4.16	0.1098	1.80	1.04
FEB 9,84	FEB 8,84	4.0	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	120.0	57.0	*****	3.94	0.1426	3.45	1.19
FEB 14,84	FEB 13,84	944.0	16.8	4.12	4.55	0.0482	1.20	0.23
FEB 20,84	FEB 19,84	178.0	28.5	4.12	4.39	0.0752	1.60	0.83
FEB 21,84	FEB 20,84	70.0	*****	*****	4.48	0.0630	0.85	0.85
FEB 26,84	FEB 25,84	25.0	*****	*****	4.31	0.0770	*****	*****
FEB 28,84	FEB 27,84	32.0	*****	*****	G 7.09	0.0138	0.80	0.04
FEB 29,84	FEB 28,84	160.0	3.5	*****	G 6.49	0.0148	0.40	<T 0.01
MAR 5,84	MAR 4,84	64.0	*****	*****	5.01	0.0290	0.75	0.42
MAR 6,84	MAR 5,84	300.0	25.5	4.11	4.30	0.0732	2.25	0.59
MAR 11,84	MAR 10,84	9.0	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	761.0	61.5	3.68	3.89	0.1532	4.60	1.00
MAR 17,84	MAR 16,84	1271.0	19.5	4.12	4.38	0.0618	1.45	0.15
MAR 22,84	MAR 21,84	647.0	16.0	4.19	4.49	0.0504	1.20	0.23
MAR 23,84	MAR 22,84	88.0	*****	*****	4.15	0.0984	1.55	0.66
APR 5,84	APR 4,84	873.0	5.6	G 5.00	G 5.15	0.0308	0.40	0.06
APR 6,84	APR 5,84	1.0	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	36.0	*****	*****	4.77	0.0442	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

#06

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	*****	0.39	*****	*****	*****	0.006	0.0776
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	*****	0.43	*****	*****	*****	*****	0.0355
JAN 6,84	JAN 5,84	0.10	0.33	0.020	<W 0.005	0.060	0.306	0.0562
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	*****	0.44	*****	*****	*****	*****	0.0355
JAN 10,84	JAN 9,84	*****	0.81	*****	*****	*****	*****	G 0.0033
JAN 14,84	JAN 13,84	0.17	0.53	0.040	<W 0.005	0.165	<W 0.002	0.0708
JAN 15,84	JAN 14,84	*****	*****	*****	*****	*****	*****	*****
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 17,84	*****	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 20,84	*****	*****	*****	*****	*****	*****	G 0.0001
JAN 23,84	JAN 22,84	*****	*****	*****	*****	*****	*****	0.0479
JAN 24,84	JAN 23,84	0.11	0.16	0.020	<W 0.005	0.095	0.072	0.0245
JAN 27,84	JAN 26,84	B 1.77	B 1.00	B 0.120	B 0.355	B 0.595	D 0.350	G 0.0062
JAN 28,84	JAN 27,84	0.19	0.20	0.020	0.025	0.055	0.400	0.0407
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	0.0525
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	0.0355
FEB 3,84	FEB 2,84	0.62	0.69	0.060	<T 0.005	G 0.325	0.080	0.1023
FEB 4,84	FEB 3,84	*****	G 1.11	*****	*****	*****	0.050	0.0550
FEB 5,84	FEB 4,84	0.35	0.49	0.035	0.020	0.210	0.150	0.0692
FEB 9,84	FEB 8,84	*****	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	0.60	0.59	0.055	0.025	0.260	0.180	0.1148
FEB 14,84	FEB 13,84	0.13	0.14	0.015	<W 0.005	0.090	0.050	0.0282
FEB 20,84	FEB 19,84	0.31	0.33	0.025	0.025	0.230	0.374	0.0407
FEB 21,84	FEB 20,84	*****	0.37	*****	*****	*****	0.160	0.0331
FEB 26,84	FEB 25,84	*****	*****	*****	*****	*****	*****	0.0490
FEB 28,84	FEB 27,84	*****	0.80	*****	*****	*****	*****	G 0.0001
FEB 29,84	FEB 28,84	0.26	0.20	0.040	<T 0.010	0.125	<W 0.002	G 0.0003
MAR 5,84	MAR 4,84	*****	0.45	*****	*****	*****	0.010	0.0098
MAR 6,84	MAR 5,84	0.19	0.17	0.025	<T 0.015	0.080	0.460	0.0501
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	0.34	B 0.98	0.050	D 0.110	B 0.550	0.460	0.1288
MAR 17,84	MAR 16,84	0.05	0.21	0.010	0.020	0.105	0.046	0.0417
MAR 22,84	MAR 21,84	0.14	0.17	0.025	<T 0.010	0.085	0.072	0.0324
MAR 23,84	MAR 22,84	0.15	0.57	0.015	0.020	B 0.405	0.064	0.0708
APR 5,84	APR 4,84	0.02	<T 0.01	<W 0.005	<W 0.005	<W 0.005	0.025	G 0.0071
APR 6,84	APR 5,84	*****	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	*****	*****	*****	*****	*****	*****	0.0170

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

#06

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
APR 14,84	APR 13,84	850 850	1100 810	1	5.4	1	29802	2	1	U 93	FJ HM
APR 15,84	APR 14,84	850 945	1000 745	1	11.1	1	29803	2	1	U 110	FJCQ J
APR 16,84	APR 15,84	945 750	1030 1800	1	1.0	1	29804	2	1	U 82	FJ
APR 17,84	APR 16,84	750 755	945 730	1	16.0	1	29805	2	1	U 93	FJ HM
APR 18,84	APR 17,84	755 755	1400 1530	1	0.2	1	29806	2	1	U 54	EFJ
APR 24,84	APR 23,84	750 750	810 730	1	7.0	1	29807	2	1	95	
APR 25,84	APR 24,84	750 755	915 1400	1	2.2	1	29808	2	1	67	
MAY 1,84	APR 30,84	755 755	800 700	1	6.2	1	29809	2	1	95	C JH
MAY 2,84	MAY 1,84	755 755	400 600	2	0.4	1	29810	2	1	89	
MAY 4,84	MAY 3,84	755 755	300 755	1	10.4	1	29811	2	1	99	
MAY 5,84	MAY 4,84	755 850	755 1145	1	3.1	1	29812	2	1	75	
MAY 8,84	MAY 7,84	755 755	1600 755	1	4.2	1	29813	2	1	104	
MAY 9,84	MAY 8,84	755 750	755 1130	1	25.0	1	29814	2	1	99	
MAY 10,84	MAY 9,84	750 755	1800 2100	1	1.0	1	29817	2	1	20	N
MAY 12,84	MAY 11,84	750 750	815 2200	1	15.3	1	29818	2	1	102	
MAY 22,84	MAY 21,84	750 750	700 750	1	2.2	1	29819	2	1	95	
MAY 23,84	MAY 22,84	750 750	2330 700	1	9.0	1	29821	2	1	96	
MAY 25,84	MAY 24,84	750 750	200 530	1	1.1	1	29822	2	1	80	
MAY 26,84	MAY 25,84	750 850	2330 700	1	10.4	1	29823	2	1	111	
MAY 29,84	MAY 28,84	755 755	1700 755	1	7.0	1	29824	2	1	87	
MAY 30,84	MAY 29,84	755 755	930 600	1	2.2	1	29825	2	1	36	N
MAY 31,84	MAY 30,84	755 755	1100 600	1	2.1	1	29826	2	1	129	N
JUN 6,84	JUN 5,84	755 755	400 745	1	2.2	1	29827	2	1	104	
JUN 7,84	JUN 6,84	755 750	2000 2100	1	7.1	1	29828	2	1	103	JHC
JUN 11,84	JUN 10,84	750 750	2000 2200	1	6.1	1	29829	2	1	101	C JH
JUN 13,84	JUN 12,84	750 750	200 300	1	1.0	1	29830	2	1	60	
JUN 18,84	JUN 17,84	750 750	245 730	1	25.0	1	29831	2	1	116	
JUN 19,84	JUN 18,84	750 755	900 1100	1	0.3	1	29834	2	1	197	N
JUN 24,84	JUN 23,84	745 745	400 745	1	19.1	1	29836	2	1	72	
JUN 27,84	JUN 26,84	750 750	645 750	1	0.2	1	29837	2	1	163	N
JUN 28,84	JUN 27,84	750 755	830 600	1	18.1	1	29838	2	1	106	
JUL 4,84	JUL 3,84	800 755	420 600	1	6.4	1	29839	2	1	106	
JUL 6,84	JUL 5,84	800 755	1915 2200	1	3.2	1	29840	2	1	100	J
JUL 7,84	JUL 6,84	755 830	1100 2200	1	12.0	1	29841	2	1	109	
JUL 8,84	JUL 7,84	830 850	1000 1600	1	0.4	1	29842	2	1	152	N
JUL 11,84	JUL 10,84	800 755	430 745	1	25.0	1	29843	2	1	72	
JUL 16,84	JUL 15,84	800 750	1610 1700	1	5.0	1	29846	2	1	102	
JUL 19,84	JUL 18,84	750 750	1750 1900	1	4.2	1	29847	2	1	119	
JUL 21,84	JUL 20,84	1045 1045	1230 1900	1	17.0	1	29848	2	1	99	
JUL 27,84	JUL 26,84	1100 755	1620 1650	1	0.3	1	29850	2	1	119	



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

#06

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 14,84	APR 13,84	325.0	G 97.8	3.72	3.73	G 0.2420	0.70	1.74
APR 15,84	APR 14,84	785.0	14.8	B 5.88	B 7.39	0.0310	1.30	0.17
APR 16,84	APR 15,84	53.0	*****	*****	4.01	0.1346	3.75	0.68
APR 17,84	APR 16,84	956.0	5.8	G 4.95	G 5.17	0.0286	0.40	0.60
APR 18,84	APR 17,84	7.0	*****	*****	*****	*****	*****	*****
APR 24,84	APR 23,84	429.0	21.5	4.38	4.39	0.0684	1.85	0.30
APR 25,84	APR 24,84	95.0	16.0	*****	4.60	0.0516	1.00	0.24
MAY 1,84	APR 30,84	381.0	27.0	G 4.79	G 5.63	0.0326	D 5.50	0.70
MAY 2,84	MAY 1,84	23.0	*****	*****	5.00	D 0.0386	*****	*****
MAY 4,84	MAY 3,84	662.0	10.6	4.65	4.77	0.0430	0.85	0.14
MAY 5,84	MAY 4,84	151.0	8.5	*****	D 4.86	0.0376	0.55	0.11
MAY 8,84	MAY 7,84	281.0	47.5	4.04	4.04	0.1220	4.40	0.82
MAY 9,84	MAY 8,84	1592.0	16.3	4.50	4.61	0.0502	1.55	0.13
MAY 10,84	MAY 9,84	13.0	*****	*****	*****	*****	*****	*****
MAY 12,84	MAY 11,84	1008.0	60.1	3.97	4.10	0.1286	6.90	1.16
MAY 22,84	MAY 21,84	135.0	65.0	*****	3.87	0.1652	6.15	0.77
MAY 23,84	MAY 22,84	555.0	13.9	4.55	4.66	0.0430	1.20	0.24
MAY 25,84	MAY 24,84	57.0	*****	*****	4.09	0.1150	5.60	1.00
MAY 26,84	MAY 25,84	742.0	24.3	4.27	4.39	0.0658	2.30	0.45
MAY 29,84	MAY 28,84	394.0	14.5	4.45	4.56	0.0486	1.45	0.10
MAY 30,84	MAY 29,84	52.0	*****	*****	4.03	0.1204	3.35	0.53
MAY 31,84	MAY 30,84	174.0	13.2	4.65	4.74	0.0394	1.60	0.13
JUN 6,84	JUN 5,84	148.0	66.8	*****	4.04	0.1310	7.05	1.35
JUN 7,84	JUN 6,84	472.0	18.5	4.55	5.12	0.0290	2.35	0.34
JUN 11,84	JUN 10,84	395.0	31.3	G 5.79	5.28	0.0234	5.70	1.11
JUN 13,84	JUN 12,84	39.0	*****	*****	3.73	0.2440	12.00	1.81
JUN 18,84	JUN 17,84	1871.0	28.5	4.28	4.26	0.0682	2.65	0.33
JUN 19,84	JUN 18,84	38.0	*****	*****	5.10	0.0292	1.95	0.31
JUN 24,84	JUN 23,84	887.0	14.2	4.49	4.55	0.0420	1.35	0.12
JUN 27,84	JUN 26,84	21.0	*****	*****	G 6.54	*****	*****	*****
JUN 28,84	JUN 27,84	1232.0	31.5	4.15	4.17	0.0896	3.95	0.44
JUL 4,84	JUL 3,84	436.0	98.0	3.65	3.64	0.2680	12.00	1.24
JUL 6,84	JUL 5,84	207.0	18.5	G 5.58	G 6.57	0.0180	2.95	0.76
JUL 7,84	JUL 6,84	840.0	15.0	4.43	4.53	0.0500	1.95	0.30
JUL 8,84	JUL 7,84	39.0	*****	*****	G 6.67	0.0136	1.00	0.12
JUL 11,84	JUL 10,84	1167.0	28.5	4.10	4.18	0.0900	3.30	0.39
JUL 16,84	JUL 15,84	327.0	92.6	3.68	3.67	0.2440	12.00	1.13
JUL 19,84	JUL 18,84	322.0	39.0	4.30	4.26	0.0776	5.35	D 0.98
JUL 21,84	JUL 20,84	1089.0	29.3	4.39	4.37	0.0620	4.00	0.68
JUL 27,84	JUL 26,84	23.0	*****	*****	B 6.62	0.0148	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

#06

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 14,84	APR 13,84	0.27	0.29	0.050	0.080	0.065	0.965	0.1862
APR 15,84	APR 14,84	0.35	0.30	0.040	B 0.560	0.195	D 1.450	B 0.0000
APR 16,84	APR 15,84	*****	0.38	*****	*****	*****	0.140	0.0977
APR 17,84	APR 16,84	0.07	0.03	<W 0.005	<T 0.005	<W 0.005	0.015	G 0.0068
APR 18,84	APR 17,84	*****	*****	*****	*****	*****	*****	*****
APR 24,84	APR 23,84	0.17	0.09	0.020	0.020	0.030	0.100	0.0407
APR 25,84	APR 24,84	0.14	0.07	0.015	<T 0.010	0.080	0.075	0.0251
MAY 1,84	APR 30,84	G 1.75	0.35	G 0.180	0.130	0.255	D 0.870	G 0.0023
MAY 2,84	MAY 1,84	*****	*****	*****	*****	*****	*****	0.0100
MAY 4,84	MAY 3,84	0.05	<T 0.02	0.010	<W 0.005	0.015	0.050	0.0170
MAY 5,84	MAY 4,84	0.11	<W 0.01	0.010	<T 0.015	0.035	0.005	D 0.0138
MAY 8,84	MAY 7,84	0.29	0.15	0.050	0.025	0.065	0.785	0.0912
MAY 9,84	MAY 8,84	0.04	0.03	0.010	<W 0.005	0.020	0.165	0.0245
MAY 10,84	MAY 9,84	*****	*****	*****	*****	*****	*****	*****
MAY 12,84	MAY 11,84	1.05	0.27	0.110	0.070	0.075	1.050	0.0794
MAY 22,84	MAY 21,84	0.25	0.23	0.045	0.080	0.105	0.400	0.1349
MAY 23,84	MAY 22,84	0.10	0.04	0.020	0.030	0.015	0.190	0.0219
MAY 25,84	MAY 24,84	*****	0.24	*****	*****	*****	*****	0.0813
MAY 26,84	MAY 25,84	0.26	0.10	0.065	0.035	0.020	0.250	0.0407
MAY 29,84	MAY 28,84	0.09	0.05	0.015	0.025	<T 0.005	0.040	0.0275
MAY 30,84	MAY 29,84	*****	0.07	*****	*****	*****	0.085	0.0933
MAY 31,84	MAY 30,84	0.11	0.05	0.005	<T 0.010	<T 0.010	0.255	0.0182
JUN 6,84	JUN 5,84	G 1.39	0.59	G 0.370	G 0.205	0.250	0.815	0.0912
JUN 7,84	JUN 6,84	0.49	0.19	0.125	0.085	0.100	0.500	0.0076
JUN 11,84	JUN 10,84	G 1.93	0.37	G 0.350	0.135	0.245	1.250	0.0052
JUN 13,84	JUN 12,84	*****	0.58	*****	*****	*****	*****	0.1862
JUN 18,84	JUN 17,84	0.05	0.09	0.010	0.030	0.025	0.400	0.0550
JUN 19,84	JUN 18,84	*****	0.13	*****	*****	*****	*****	0.0079
JUN 24,84	JUN 23,84	<T 0.02	0.04	0.005	<T 0.005	<W 0.005	*****	0.0282
JUN 27,84	JUN 26,84	*****	*****	*****	*****	*****	*****	G 0.0003
JUN 28,84	JUN 27,84	0.26	0.22	0.045	0.045	D 0.030	0.460	0.0676
JUL 4,84	JUL 3,84	0.68	0.31	0.120	0.040	0.030	0.835	0.2291
JUL 6,84	JUL 5,84	G 1.48	0.29	0.140	0.070	0.085	0.865	G 0.0003
JUL 7,84	JUL 6,84	0.18	0.13	0.025	<T 0.015	0.030	0.310	0.0295
JUL 8,84	JUL 7,84	*****	0.40	*****	*****	*****	*****	G 0.0002
JUL 11,84	JUL 10,84	0.14	0.14	D 0.020	0.025	0.025	0.315	0.0661
JUL 16,84	JUL 15,84	0.99	0.30	0.155	0.100	0.050	0.840	0.2138
JUL 19,84	JUL 18,84	G 1.30	0.22	0.225	0.070	0.135	0.785	0.0550
JUL 21,84	JUL 20,84	0.85	0.11	0.180	0.030	0.065	0.550	0.0427
JUL 27,84	JUL 26,84	*****	*****	*****	*****	*****	*****	B 0.0002

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : BALSAM LAKE/DAILY/AEROCHEM #06

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.		PRECIP START/END HR. HR.		SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE	
AUG 2,84	AUG 1,84	755	755	805	2300	1	15.0	1	29851	2	1	97		
AUG 7,84	AUG 6,84	755	755	1600	2330	1	4.0	1	29854	2	1	92		
AUG 8,84	AUG 7,84	755	755	1800	2100	1	2.2	1	29855	2	1	109		
AUG 13,84	AUG 12,84	745	745	1300	720	1	11.3	1	29856	2	1	101		
AUG 14,84	AUG 13,84	745	750	1830	1915	1	0.4	1	29857	2	1	46		N
AUG 16,84	AUG 15,84	755	755	1800	100	1	15.1	1	29858	2	1	103		
AUG 19,84	AUG 18,84	1030	1030	1700	400	1	15.2	1	29859	2	1	103		
AUG 23,84	AUG 22,84	755	755	1300	745	1	5.1	1	29861	2	1	92		
AUG 29,84	AUG 28,84	750	750	400	700	1	5.3	1	29862	2	1	120		N
AUG 30,84	AUG 29,84	750	755	1430	750	1	49.0	1	29863	2	1	68	A	
AUG 31,84	AUG 30,84	755	750	600	700	1	2.1	1	29864	2	1	86		
SEP 2,84	AUG 31,84	755	945	2300	945	1	4.1	1	29865	2	1	178		NZ
SEP 3,84	SEP 2,84	945	850	945	600	1	4.2	1	29866	2	1	171		N
SEP 10,84	SEP 9,84	750	750	1600	600	1	7.0	1	29868	2	1	96		
SEP 11,84	SEP 10,84	750	755	1515	600	1	3.0	1	29869	2	1	107		
SEP 12,84	SEP 11,84	755	755	900	1300	1	1.2	1	29870	2	1	61		
SEP 13,84	SEP 12,84	755	900	2200	900	1	25.0	1	29871	2	1	102		
SEP 14,84	SEP 13,84	900	755	815	1300	1	4.0	1	29872	2	1	76		M
SEP 16,84	SEP 14,84	755	1000	100	600	1	3.0	1	29873	2	1	86		Z
SEP 17,84	SEP 16,84	1000	755	1100	1900	1	1.1	1	29874	2	1	52		
SEP 23,84	SEP 22,84	1015	1015	300	700	1	0.3	1	29875	2	1	72		
SEP 26,84	SEP 25,84	750	750	1300	1400	1	4.3	1	29876	2	1	102		
SEP 29,84	SEP 28,84	830	830	1700	600	1	1.2	1	29877	2	1	75		
OCT 3,84	OCT 2,84	755	755	400	700	1	3.0	1	29878	2	1	67		H
OCT 4,84	OCT 3,84	755	755	1100	2000	1	0.4	1	29879	2	1	179	Q	N
OCT 8,84	OCT 7,84	910	910	1700	910	1	8.0	1	29880	2	1	88		
OCT 9,84	OCT 8,84	910	755	910	700	1	1.3	1	29881	2	1	78		
OCT 18,84	OCT 17,84	750	750	1600	600	1	22.0	1	29883	2	1	100		
OCT 20,84	OCT 19,84	845	845	1115	1800	1	5.0	1	29886	2	1	83		
OCT 21,84	OCT 20,84	845	910	2200	830	1	2.0	1	29887	2	1	85		
OCT 22,84	OCT 21,84	910	755	1000	2000	1	1.0	1	29888	2	1	40		N
OCT 26,84	OCT 25,84	750	750	1700	600	1	7.0	1	29889	2	1	89		
OCT 27,84	OCT 26,84	750	845	930	600	1	2.4	1	29890	2	1	81		
OCT 28,84	OCT 27,84	845	1030	1100	2000	1	4.0	1	29891	2	1	95		
NOV 2,84	OCT 31,84	750	750	1600	600	1	4.4	2	29892	2	1	153		NZ
NOV 3,84	NOV 2,84	750	745	830	****	3	1.2	2	29893	2	1	67		
NOV 5,84	NOV 4,84	745	745	900	600	1	35.0	2	29894	2	1	105		
NOV 7,84	NOV 6,84	750	750	915	1545	3	1.0	2	29897	2	1	70		
NOV 10,84	NOV 9,84	915	915	1645	900	1	14.3	2	29898	2	1	105		
NOV 11,84	NOV 10,84	915	1000	945	900	1	17.0	2	29899	2	1	99		

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH0.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 2,84	AUG 1,84	934.0	17.4	4.45	4.48	0.0516	2.15	0.20
AUG 7,84	AUG 6,84	236.0	78.5	3.79	3.77	0.1848	9.25	0.84
AUG 8,84	AUG 7,84	155.0	47.2	*****	3.95	0.1294	5.35	0.14
AUG 13,84	AUG 12,84	735.0	18.0	4.32	4.39	0.0566	1.90	0.17
AUG 14,84	AUG 13,84	12.0	*****	*****	*****	*****	*****	*****
AUG 16,84	AUG 15,84	1001.0	19.0	4.48	4.57	0.0462	2.70	0.23
AUG 19,84	AUG 18,84	1004.0	21.6	4.26	4.32	0.0650	1.85	0.35
AUG 23,84	AUG 22,84	304.0	> 100.0	3.54	3.57	G 0.3060	11.20	1.14
AUG 29,84	AUG 28,84	410.0	57.0	3.89	3.95	0.1406	5.00	0.65
AUG 30,84	AUG 29,84	2144.0	32.2	4.15	4.25	0.0796	3.40	0.38
AUG 31,84	AUG 30,84	116.0	50.0	*****	4.04	0.1216	3.65	0.93
SEP 2,84	AUG 31,84	470.0	18.8	4.33	4.40	0.0572	1.75	0.18
SEP 3,84	SEP 2,84	462.0	35.8	4.06	4.15	0.0938	3.35	0.36
SEP 10,84	SEP 9,84	434.0	33.6	4.15	4.27	0.0828	3.10	0.58
SEP 11,84	SEP 10,84	207.0	26.8	4.24	4.37	0.0674	2.25	0.46
SEP 12,84	SEP 11,84	47.0	*****	*****	G 5.33	0.0224	0.30	0.13
SEP 13,84	SEP 12,84	1644.0	24.0	4.24	4.34	0.0674	1.90	0.31
SEP 14,84	SEP 13,84	195.0	12.2	4.55	4.70	0.0414	1.15	0.15
SEP 16,84	SEP 14,84	167.0	12.0	4.56	4.70	0.0396	1.15	0.15
SEP 17,84	SEP 16,84	37.0	*****	*****	5.06	0.0284	0.75	0.04
SEP 23,84	SEP 22,84	14.0	*****	*****	3.52	G 0.3520	*****	*****
SEP 26,84	SEP 25,84	282.0	34.5	4.11	4.25	0.0832	3.45	0.56
SEP 29,84	SEP 28,84	58.0	*****	*****	4.23	0.0972	5.00	G 2.60
OCT 3,84	OCT 2,84	130.0	25.8	*****	G 6.87	0.0234	4.15	1.03
OCT 4,84	OCT 3,84	46.0	*****	*****	5.24	0.0268	1.00	0.04
OCT 8,84	OCT 7,84	454.0	> 100.0	3.55	3.57	G 0.3280	10.80	1.39
OCT 9,84	OCT 8,84	65.0	*****	*****	3.81	0.1766	6.30	0.88
OCT 18,84	OCT 17,84	1413.0	45.7	3.87	3.99	0.1208	3.45	0.59
OCT 20,84	OCT 19,84	268.0	65.0	3.76	3.86	0.1598	D 5.45	0.83
OCT 21,84	OCT 20,84	110.0	65.0	*****	3.85	0.1582	5.45	0.84
OCT 22,84	OCT 21,84	26.0	*****	*****	3.85	0.1674	*****	*****
OCT 26,84	OCT 25,84	400.0	9.0	4.63	5.01	0.0270	0.85	0.17
OCT 27,84	OCT 26,84	125.0	66.0	*****	3.90	0.1668	4.35	1.36
OCT 28,84	OCT 27,84	245.0	66.0	3.79	3.90	0.1600	5.30	1.05
NOV 2,84	OCT 31,84	432.0	38.3	4.01	4.05	0.0948	3.30	0.76
NOV 3,84	NOV 2,84	52.0	*****	*****	G 7.04	0.0154	1.15	0.07
NOV 5,84	NOV 4,84	2363.0	29.9	4.01	4.13	0.0808	2.65	0.37
NOV 7,84	NOV 6,84	45.0	*****	*****	4.50	0.0506	1.95	0.29
NOV 10,84	NOV 9,84	971.0	43.5	D 4.09	4.07	0.1112	3.00	0.84
NOV 11,84	NOV 10,84	1079.0	21.8	4.40	4.40	0.0574	1.50	0.39

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 2,84	AUG 1,84	0.10	0.04	0.020	<T 0.010	0.015	0.290	0.0331
AUG 7,84	AUG 6,84	0.68	0.16	0.155	0.060	<T 0.010	0.885	0.1698
AUG 8,84	AUG 7,84	0.14	0.08	0.020	0.020	<T 0.010	0.220	0.1122
AUG 13,84	AUG 12,84	0.06	0.08	0.005	<W 0.005	<W 0.005	0.155	0.0407
AUG 14,84	AUG 13,84	*****	*****	*****	*****	*****	*****	*****
AUG 16,84	AUG 15,84	0.28	0.08	0.030	<T 0.005	<W 0.005	0.395	0.0269
AUG 19,84	AUG 18,84	0.14	0.10	0.005	<W 0.005	<W 0.005	0.120	0.0479
AUG 23,84	AUG 22,84	0.27	0.26	0.055	<W 0.005	<T 0.005	0.495	0.2692
AUG 29,84	AUG 28,84	0.12	0.17	0.015	<W 0.005	<W 0.005	0.325	0.1122
AUG 30,84	AUG 29,84	0.12	0.11	0.020	<T 0.005	<W 0.005	0.415	0.0562
AUG 31,84	AUG 30,84	0.31	D 0.17	0.025	0.070	0.075	0.355	0.0912
SEP 2,84	AUG 31,84	0.05	0.04	0.005	0.020	0.015	0.125	0.0398
SEP 3,84	SEP 2,84	0.11	0.08	0.005	0.020	<T 0.010	0.225	0.0708
SEP 10,84	SEP 9,84	0.34	0.19	0.080	<T 0.010	0.110	0.255	0.0537
SEP 11,84	SEP 10,84	0.29	0.37	0.040	<T 0.010	0.250	0.155	0.0427
SEP 12,84	SEP 11,84	*****	0.05	*****	*****	*****	0.045	G 0.0047
SEP 13,84	SEP 12,84	0.06	0.07	0.005	<T 0.005	<T 0.010	0.130	0.0457
SEP 14,84	SEP 13,84	0.08	0.05	0.005	<T 0.005	<T 0.010	0.060	0.0200
SEP 16,84	SEP 14,84	0.09	0.05	0.005	<T 0.005	<T 0.010	0.060	0.0200
SEP 17,84	SEP 16,84	*****	0.07	*****	*****	*****	*****	0.0087
SEP 23,84	SEP 22,84	*****	*****	*****	*****	*****	*****	0.3020
SEP 26,84	SEP 25,84	0.23	0.17	0.025	0.060	0.095	0.530	0.0562
SEP 29,84	SEP 28,84	*****	0.65	*****	*****	*****	1.150	0.0589
OCT 3,84	OCT 2,84	G 1.81	0.20	G 0.345	0.100	0.100	0.745	G 0.0001
OCT 4,84	OCT 3,84	*****	0.05	*****	*****	*****	*****	0.0058
OCT 8,84	OCT 7,84	0.15	0.32	0.030	0.075	0.035	1.100	0.2692
OCT 9,84	OCT 8,84	*****	0.15	*****	*****	*****	0.575	0.1549
OCT 18,84	OCT 17,84	0.10	0.06	<W 0.005	<T 0.010	<T 0.010	0.270	0.1023
OCT 20,84	OCT 19,84	0.17	0.35	0.030	0.030	0.155	0.425	0.1380
OCT 21,84	OCT 20,84	0.20	0.35	0.030	0.050	D 0.160	0.430	0.1413
OCT 22,84	OCT 21,84	*****	*****	*****	*****	*****	*****	0.1413
OCT 26,84	OCT 25,84	0.21	0.05	0.010	<T 0.010	<W 0.005	0.085	0.0098
OCT 27,84	OCT 26,84	0.11	0.13	0.005	0.075	0.140	0.465	0.1259
OCT 28,84	OCT 27,84	0.13	0.57	0.050	0.060	0.330	0.485	0.1259
NOV 2,84	OCT 31,84	0.53	0.20	0.075	0.030	0.045	0.255	0.0891
NOV 3,84	NOV 2,84	*****	0.20	*****	*****	*****	<W 0.005	G 0.0001
NOV 5,84	NOV 4,84	<W 0.01	0.09	<W 0.005	<W 0.005	0.015	D 0.220	0.0741
NOV 7,84	NOV 6,84	*****	0.12	*****	*****	*****	*****	0.0316
NOV 10,84	NOV 9,84	0.18	0.27	0.025	<T 0.015	0.120	0.380	0.0851
NOV 11,84	NOV 10,84	0.05	0.28	0.010	<W 0.005	0.185	0.210	0.0398

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
NOV 12,84	NOV 11,84	1000 750	1030 700	3	3.3	2	42001	2	1	110	
NOV 13,84	NOV 12,84	750 755	900 2200	2	0.3	2	42002	2	1	83	
NOV 16,84	NOV 15,84	750 750	1000 2200	1	6.0	2	42003	2	1	125	N
NOV 17,84	NOV 16,84	750 900	1330 700	2	8.0	2	42004	2	1	69	
NOV 18,84	NOV 17,84	900 915	930 1330	2	4.0	2	42005	2	1	33	N
NOV 29,84	NOV 28,84	800 800	1300 2000	1	3.1	2	42008	2	1	135	N
DEC 1,84	NOV 30,84	830 830	1400 2300	3	0.2	2	42009	2	1	468	N
DEC 2,84	DEC 1,84	830 915	1500 2330	2	0.4	2	42010	2	1	253	N
DEC 4,84	DEC 3,84	755 755	810 1030	2	4.0	2	42011	2	1	97	
DEC 5,84	DEC 4,84	755 755	900 700	2	5.0	2	42012	2	1	60	JC
DEC 6,84	DEC 5,84	755 800	****	2	7.2	2	42013	2	1	86	
DEC 9,84	DEC 8,84	800 1015	1000 2000	3	1.2	2	42014	2	1	53	
DEC 13,84	DEC 12,84	755 755	930 700	1	12.3	2	42015	2	1	106	
DEC 15,84	DEC 14,84	850 850	1730 600	3	3.1	2	42016	2	1	89	
DEC 19,84	DEC 18,84	750 750	930 1800	3	1.0	2	42017	2	1	99	
DEC 20,84	DEC 19,84	750 750	815 1400	2	3.2	2	42018	2	1	19	N
DEC 21,84	DEC 20,84	755 755	810 500	2	3.1	2	42019	2	1	28	N
DEC 22,84	DEC 21,84	755 845	1620 610	*	13.0	2	42020	2	1	63	
DEC 24,84	DEC 23,84	****	****	2	4.3	2	42021	2	1	47	N
DEC 25,84	DEC 24,84	815 1015	815 2100	2	9.1	2	42022	2	1	73	
DEC 26,84	DEC 25,84	1015 900	2300 200	2	5.0	2	42023	2	1	****	EFIK
DEC 27,84	DEC 26,84	900 755	300 600	2	1.0	2	42024	2	1	****	EFIK
DEC 28,84	DEC 27,84	755 750	2100 730	3	5.1	2	42025	2	1	48	N
DEC 29,84	DEC 28,84	750 1030	1600 900	1	14.2	2	42026	2	1	133	N

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
NOV 12,84	NOV 11,84	234.0	34.7	4.14	4.13	0.0960	2.85	D 0.42
NOV 13,84	NOV 12,84	16.0	*****	*****	4.19	0.0870	*****	*****
NOV 16,84	NOV 15,84	482.0	38.0	4.12	4.16	0.0980	3.20	0.59
NOV 17,84	NOV 16,84	357.0	14.4	4.60	4.78	D 0.0392	1.40	D 0.44
NOV 18,84	NOV 17,84	86.0	22.6	*****	4.57	0.0534	2.15	0.72
NOV 29,84	NOV 28,84	270.0	22.6	4.13	4.50	0.0602	2.15	0.44
DEC 1,84	NOV 30,84	60.0	68.3	*****	3.87	0.1582	3.25	2.25
DEC 2,84	DEC 1,84	65.0	17.5	*****	4.48	0.0510	1.65	0.17
DEC 4,84	DEC 3,84	250.0	17.0	4.39	4.70	0.0424	1.15	0.42
DEC 5,84	DEC 4,84	195.0	6.8	G 6.36	G 7.02	0.0138	0.35	0.09
DEC 6,84	DEC 5,84	401.0	11.6	4.46	4.67	0.0394	0.15	0.37
DEC 9,84	DEC 8,84	41.0	33.8	*****	4.40	0.0760	2.15	1.25
DEC 13,84	DEC 12,84	838.0	44.4	3.97	4.08	0.1182	3.30	0.61
DEC 15,84	DEC 14,84	178.0	41.8	4.00	4.10	0.1098	3.00	0.71
DEC 19,84	DEC 18,84	64.0	31.4	*****	4.30	0.0768	2.85	0.60
DEC 20,84	DEC 19,84	41.0	11.2	*****	4.75	0.0368	0.50	0.28
DEC 21,84	DEC 20,84	56.0	16.5	*****	G 6.84	0.0170	1.95	0.80
DEC 22,84	DEC 21,84	532.0	17.5	4.35	4.53	0.0542	0.85	0.31
DEC 24,84	DEC 23,84	132.0	41.4	*****	4.23	0.0930	2.50	1.51
DEC 25,84	DEC 24,84	428.0	31.7	4.12	4.22	0.0844	1.35	0.85
DEC 26,84	DEC 25,84	*****	*****	*****	*****	*****	*****	*****
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	157.0	17.2	4.36	4.50	0.0536	1.45	0.16
DEC 29,84	DEC 28,84	1218.0	16.5	4.44	4.62	0.0456	1.60	0.30



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : BALSAM LAKE/DAILY/AEROCHEM

#06

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
NOV 12,84	NOV 11,84	0.03	0.12	0.005	<M 0.005	0.040	D 0.135	0.0741
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	0.0646
NOV 16,84	NOV 15,84	0.16	0.24	D 0.015	<T 0.010	0.040	0.460	0.0692
NOV 17,84	NOV 16,84	0.37	0.11	0.040	0.040	0.060	0.285	0.0166
NOV 18,84	NOV 17,84	0.62	0.16	0.060	0.050	0.130	0.450	0.0269
NOV 29,84	NOV 28,84	0.21	0.17	<M 0.005	<T 0.005	0.050	0.375	0.0316
DEC 1,84	NOV 30,84	*****	0.39	*****	*****	*****	0.830	0.1349
DEC 2,84	DEC 1,84	*****	0.19	*****	*****	*****	0.040	0.0331
DEC 4,84	DEC 3,84	0.27	0.14	D 0.010	<T 0.010	0.055	0.175	0.0200
DEC 5,84	DEC 4,84	G 1.20	0.08	0.025	<M 0.005	0.090	0.025	G 0.0001
DEC 6,84	DEC 5,84	0.15	0.05	0.005	<T 0.010	<T 0.010	0.045	0.0214
DEC 9,84	DEC 8,84	*****	0.57	*****	*****	*****	*****	0.0398
DEC 13,84	DEC 12,84	0.08	0.23	<T 0.015	0.050	0.030	0.360	0.0832
DEC 15,84	DEC 14,84	0.17	0.11	<T 0.015	<T 0.020	0.080	0.225	0.0794
DEC 19,84	DEC 18,84	*****	0.15	*****	*****	*****	0.470	0.0501
DEC 20,84	DEC 19,84	*****	0.09	*****	*****	*****	0.005	0.0178
DEC 21,84	DEC 20,84	*****	0.14	*****	*****	*****	0.600	G 0.0001
DEC 22,84	DEC 21,84	<T 0.02	<T 0.01	<T 0.005	<T 0.015	<T 0.020	0.065	0.0295
DEC 24,84	DEC 23,84	0.82	0.24	G 0.120	0.110	0.160	0.685	0.0589
DEC 25,84	DEC 24,84	0.12	0.16	<T 0.010	<T 0.020	0.025	0.320	0.0603
DEC 26,84	DEC 25,84	*****	*****	*****	*****	*****	*****	*****
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	0.07	0.05	<T 0.010	<T 0.020	0.045	0.055	0.0316
DEC 29,84	DEC 28,84	0.05	0.09	<T 0.015	0.040	0.080	0.370	0.0240



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	DEC 30,83	800 900	1900 300	2	4.9	2	56190	2	1	60	Z
JAN 3,84	JAN 2,84	900 900	****	2	0.2	2	56193	2	1	7	E N
JAN 4,84	JAN 3,84	900 900	2100 200	2	2.4	2	56196	2	1	74	
JAN 5,84	JAN 4,84	900 800	2400 600	3	1.4	2	56199	2	1	51	
JAN 6,84	JAN 5,84	800 800	2400 800	3	8.8	2	56202	2	1	72	
JAN 8,84	JAN 6,84	800 900	****	2	2.8	2	56205	2	1	16	NZ
JAN 10,84	JAN 8,84	900 830	****	2	0.7	2	56208	2	1	13	E NZ
JAN 11,84	JAN 10,84	830 800	1200 1500	2	0.6	2	56211	2	1	****	EK
JAN 14,84	JAN 13,84	800 800	****	2	2.6	2	56215	2	1	8	N
JAN 17,84	JAN 16,84	800 800	****	2	0.3	2	56218	2	1	****	EK
JAN 18,84	JAN 17,84	800 800	800 800	2	6.1	2	56221	2	1	36	N
JAN 19,84	JAN 18,84	800 800	****	2	1.7	2	56224	2	1	7	E N
JAN 20,84	JAN 19,84	800 800	****	2	0.8	2	56227	2	1	1	E N
JAN 22,84	JAN 20,84	800 900	1100 1500	2	1.3	2	56229	2	1	52	Z
JAN 23,84	JAN 22,84	900 830	****	2	1.2	2	56231	2	1	42	N
JAN 24,84	JAN 23,84	830 800	2400 600	2	6.2	2	56233	2	1	80	
JAN 25,84	JAN 24,84	800 800	****	2	1.3	2	56235	2	1	50	
JAN 26,84	JAN 25,84	800 830	****	2	1.2	2	56237	2	1	44	N
JAN 27,84	JAN 26,84	830 800	1900 800	3	6.2	*	56239	2	1	77	
JAN 29,84	JAN 27,84	800 900	****	2	1.1	2	56241	2	1	12	E NZ
JAN 30,84	JAN 29,84	900 830	****	2	1.4	2	56243	2	1	26	N
JAN 31,84	JAN 30,84	830 800	****	2	0.2	2	56245	2	1	****	EK
FEB 3,84	FEB 2,84	800 800	2300 800	3	11.8	2	56247	2	1	96	
FEB 4,84	FEB 3,84	800 800	****	3	9.1	2	56249	2	1	82	
FEB 5,84	FEB 4,84	800 800	****	2	2.8	2	56251	2	1	62	
FEB 6,84	FEB 5,84	800 800	2400 800	2	2.2	2	56253	2	1	52	
FEB 7,84	FEB 6,84	800 800	800 1000	2	****	2	56255	2	1	****	E
FEB 9,84	FEB 8,84	830 800	****	2	0.2	2	56258	2	1	23	E N
FEB 11,84	FEB 10,84	800 800	2400 600	3	1.9	2	56261	2	1	64	
FEB 14,84	FEB 13,84	800 800	1200 800	1	36.4	2	56263	2	1	98	J
FEB 15,84	FEB 14,84	800 800	800 1200	1	1.8	1	56267	2	1	58	
FEB 18,84	FEB 17,84	800 800	1500 1800	1	0.2	2	56270	2	1	70	E
FEB 20,84	FEB 19,84	800 800	1400 1900	3	3.5	2	56273	2	1	80	
FEB 21,84	FEB 20,84	800 800	2400 600	2	1.2	2	56276	2	1	39	N
FEB 28,84	FEB 27,84	830 830	700 830	2	0.3	2	56279	2	1	****	EK
FEB 29,84	FEB 28,84	830 845	830 300	2	9.4	2	56282	2	1	24	NC
MAR 1,84	FEB 29,84	845 830	****	2	0.3	2	56285	2	1	****	EK
MAR 3,84	MAR 2,84	800 800	2400 600	2	0.2	2	56288	2	1	****	EK
MAR 6,84	MAR 5,84	800 830	800 2400	2	6.1	2	56291	2	1	53	
MAR 11,84	MAR 10,84	800 800	****	2	3.0	2	56294	2	1	30	N

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM

#08

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	DEC 30,83	190.0	33.7	*****	4.11	0.0990	0.55	1.11
JAN 3,84	JAN 2,84	1.0	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	114.0	23.2	*****	4.40	0.0628	1.20	0.66
JAN 5,84	JAN 4,84	46.0	*****	*****	4.04	0.1288	4.10	1.64
JAN 6,84	JAN 5,84	407.0	D 32.1	4.03	4.19	0.0936	1.65	0.94
JAN 8,84	JAN 6,84	29.0	*****	*****	4.74	0.0400	0.65	0.61
JAN 10,84	JAN 8,84	6.0	*****	*****	*****	*****	*****	*****
JAN 11,84	JAN 10,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	14.0	*****	*****	4.07	0.0972	*****	*****
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	144.0	42.5	*****	4.08	0.1002	1.50	1.13
JAN 19,84	JAN 18,84	8.0	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	1.0	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 20,84	44.0	*****	*****	4.67	0.0442	0.95	0.25
JAN 23,84	JAN 22,84	33.0	*****	*****	4.25	0.0816	0.55	1.07
JAN 24,84	JAN 23,84	320.0	18.4	4.39	4.41	0.0584	0.25	0.54
JAN 25,84	JAN 24,84	42.0	*****	*****	3.72	G 0.2320	6.80	G 2.75
JAN 26,84	JAN 25,84	34.0	*****	*****	4.50	0.0568	1.80	0.75
JAN 27,84	JAN 26,84	308.0	18.8	4.38	4.48	0.0590	0.35	0.59
JAN 29,84	JAN 27,84	9.0	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	24.0	*****	*****	4.07	B 2.5600	*****	*****
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	730.0	41.4	3.94	4.07	0.1112	2.65	0.96
FEB 4,84	FEB 3,84	481.0	34.0	4.08	4.26	0.0876	2.50	0.66
FEB 5,84	FEB 4,84	112.0	D 50.1	*****	4.01	0.1382	3.05	1.17
FEB 6,84	FEB 5,84	74.0	*****	*****	4.04	0.1362	3.70	1.17
FEB 7,84	FEB 6,84	1.0	*****	*****	*****	*****	*****	*****
FEB 9,84	FEB 8,84	3.0	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	79.0	*****	*****	3.88	0.2040	D 5.35	1.59
FEB 14,84	FEB 13,84	2309.0	D 19.2	4.07	4.50	0.0580	1.45	0.25
FEB 15,84	FEB 14,84	67.0	*****	*****	*****	*****	*****	*****
FEB 18,84	FEB 17,84	9.0	*****	*****	*****	*****	*****	*****
FEB 20,84	FEB 19,84	180.0	65.0	3.60	3.93	0.1684	5.80	1.18
FEB 21,84	FEB 20,84	30.0	*****	*****	4.39	0.0688	2.65	0.13
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	147.0	2.5	*****	G 5.77	0.0182	0.20	<T 0.01
MAR 1,84	FEB 29,84	*****	*****	*****	*****	*****	*****	*****
MAR 3,84	MAR 2,84	*****	*****	*****	*****	*****	*****	*****
MAR 6,84	MAR 5,84	208.0	15.2	4.36	4.63	0.0472	1.45	0.26
MAR 11,84	MAR 10,84	58.0	*****	*****	4.93	0.0398	1.20	1.17

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEN

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	DEC 30,83	0.19	0.36	0.030	<W 0.005	0.140	0.008	0.0776
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	*****	0.38	*****	*****	*****	0.132	0.0398
JAN 5,84	JAN 4,84	*****	0.74	*****	*****	*****	0.910	0.0912
JAN 6,84	JAN 5,84	0.05	0.27	0.015	0.025	0.055	0.460	0.0646
JAN 8,84	JAN 6,84	*****	G 1.20	*****	*****	*****	*****	0.0182
JAN 10,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
JAN 11,84	JAN 10,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	0.0851
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	0.12	0.35	0.035	<T 0.005	0.070	0.306	0.0832
JAN 19,84	JAN 18,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	*****	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 20,84	*****	0.75	*****	*****	*****	*****	0.0214
JAN 23,84	JAN 22,84	*****	G 1.00	*****	*****	*****	*****	0.0562
JAN 24,84	JAN 23,84	0.06	0.13	0.010	<T 0.005	0.045	0.026	0.0389
JAN 25,84	JAN 24,84	*****	G 0.95	*****	*****	*****	*****	0.1905
JAN 26,84	JAN 25,84	*****	0.76	*****	*****	*****	*****	0.0316
JAN 27,84	JAN 26,84	0.09	0.14	0.020	<T 0.005	0.055	0.094	0.0331
JAN 29,84	JAN 27,84	*****	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	0.0851
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	0.17	0.20	0.020	0.070	0.095	0.430	0.0851
FEB 4,84	FEB 3,84	0.14	G 1.13	0.025	0.045	G 0.650	0.510	0.0550
FEB 5,84	FEB 4,84	0.21	0.37	0.035	0.035	0.125	0.480	0.0977
FEB 6,84	FEB 5,84	*****	0.44	*****	*****	*****	0.670	0.0912
FEB 7,84	FEB 6,84	*****	*****	*****	*****	*****	*****	*****
FEB 9,84	FEB 8,84	*****	*****	*****	*****	*****	*****	*****
FEB 11,84	FEB 10,84	*****	0.82	*****	*****	*****	0.170	0.1318
FEB 14,84	FEB 13,84	0.09	0.12	0.020	0.015	0.075	D 0.122	0.0316
FEB 15,84	FEB 14,84	*****	*****	*****	*****	*****	*****	*****
FEB 18,84	FEB 17,84	*****	*****	*****	*****	*****	*****	*****
FEB 20,84	FEB 19,84	*****	0.63	*****	*****	*****	0.850	0.1175
FEB 21,84	FEB 20,84	*****	D 0.77	*****	*****	*****	*****	0.0407
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	0.10	0.06	0.010	<T 0.005	0.040	<W 0.002	G 0.0017
MAR 1,84	FEB 29,84	*****	*****	*****	*****	*****	*****	*****
MAR 3,84	MAR 2,84	*****	*****	*****	*****	*****	*****	*****
MAR 6,84	MAR 5,84	0.34	0.22	0.060	<T 0.015	0.130	0.108	0.0234
MAR 11,84	MAR 10,84	*****	G 1.02	*****	*****	*****	*****	0.0117

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
MAR 13,84	MAR 12,84	800 800	600 800	2	0.5	2	56297	2	1	****	EK
MAR 14,84	MAR 13,84	800 800	800 1800	2	1.6	2	56300	2	1	1	E N
MAR 16,84	MAR 15,84	800 800	300 800	1	25.5	2	56303	2	1	90	J
MAR 17,84	MAR 16,84	800 800	800 1200	3	9.4	2	56308	2	1	119	
MAR 22,84	MAR 21,84	830 800	1200 1800	3	10.5	2	56312	2	1	98	
MAR 23,84	MAR 22,84	800 800	800 800	2	5.4	2	56315	2	1	53	J
APR 5,84	APR 4,84	830 830	2400 830	1	10.0	1	56318	2	1	104	J
APR 6,84	APR 5,84	830 800	830 800	1	4.4	1	56321	2	1	37	N
APR 7,84	APR 6,84	800 800	2200 600	3	1.0	2	56324	2	1	24	N
APR 14,84	APR 13,84	800 800	1500 1900	1	6.1	1	56327	2	1	81	
APR 15,84	APR 14,84	800 800	300 900	1	8.0	1	56330	2	1	95	C
APR 17,84	APR 15,84	900 830	1200 830	3	12.0	1	56333	2	1	107	CZ
APR 18,84	APR 17,84	830 830	830 1200	1	0.4	1	56336	2	1	35	E N
APR 21,84	APR 20,84	800 800	1500 1600	1	0.4	1	56339	2	1	77	
APR 24,84	APR 23,84	800 800	1000 1400	1	8.2	1	56342	2	1	91	
APR 25,84	APR 24,84	800 800	830 1600	1	0.8	1	56345	2	1	38	N
APR 29,84	APR 28,84	900 900	1000 1230	1	0.6	1	56348	2	1	156	N
APR 30,84	APR 29,84	900 900	500 900	1	4.1	1	56351	2	1	99	C
MAY 1,84	APR 30,84	900 830	1900 200	3	3.9	1	56354	2	1	U 45	CFI
MAY 2,84	MAY 1,84	830 800	830 700	2	2.5	1	56357	2	1	63	
MAY 4,84	MAY 3,84	800 800	430 800	1	2.6	1	56360	2	1	86	
MAY 6,84	MAY 4,84	800 800	800 1100	1	3.1	1	56363	2	1	87	Z
MAY 8,84	MAY 7,84	800 800	400 900	1	3.8	1	56366	2	1	102	
MAY 9,84	MAY 8,84	800 800	800 2400	1	19.2	1	56369	2	1	104	
MAY 10,84	MAY 9,84	800 800	1630 2030	1	2.6	1	56374	2	1	49	NHM
MAY 12,84	MAY 11,84	800 800	1400 1900	1	7.4	1	56377	2	1	95	
MAY 18,84	MAY 17,84	800 800	****	1	0.2	1	56381	2	1	54	E
MAY 22,84	MAY 21,84	800 800	530 800	1	4.8	1	56384	2	1	120	N
MAY 23,84	MAY 22,84	800 800	1600 1630	1	50.6	1	56387	2	1	98	
MAY 24,84	MAY 23,84	800 800	1600 1700	1	2.8	1	56390	2	1	84	
MAY 25,84	MAY 24,84	800 800	200 300	1	0.4	1	56393	2	1	46	N
MAY 26,84	MAY 25,84	800 800	2030 800	1	21.1	1	56396	2	1	102	
MAY 29,84	MAY 28,84	800 800	2300 800	1	9.8	1	56399	2	1	101	
MAY 30,84	MAY 29,84	800 900	430 630	1	4.8	1	56402	2	1	55	
MAY 31,84	MAY 30,84	900 800	1000 1800	1	1.8	1	56405	2	1	47	N
JUN 3,84	JUN 2,84	900 900	800 830	1	0.4	1	56408	2	1	89	
JUN 7,84	JUN 6,84	800 800	130 230	1	2.4	1	56412	2	1	99	
JUN 8,84	JUN 7,84	800 800	1730 1900	1	9.4	1	56415	2	1	106	
JUN 11,84	JUN 10,84	830 830	1830 1930	1	4.2	1	56418	2	1	U 108	FJ JHC
JUN 13,84	JUN 12,84	800 845	200 300	1	3.6	1	56421	2	1	105	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	2.0	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	1474.0	40.4	3.70	4.06	0.1016	2.90	0.70
MAR 17,84	MAR 16,84	722.0	16.7	4.48	4.48	0.0542	1.35	0.10
MAR 22,84	MAR 21,84	660.0	12.7	4.57	4.62	0.0416	1.00	0.18
MAR 23,84	MAR 22,84	185.0	30.8	3.75	4.14	0.0944	1.90	0.56
APR 5,84	APR 4,84	668.0	10.6	4.20	4.72	0.0404	0.60	0.13
APR 6,84	APR 5,84	106.0	23.0	*****	4.33	0.0736	1.20	0.40
APR 7,84	APR 6,84	16.0	*****	*****	4.73	B 0.9960	*****	*****
APR 14,84	APR 13,84	317.0	56.5	3.96	4.01	0.1540	3.95	0.98
APR 15,84	APR 14,84	490.0	7.3	G 4.93	5.11	0.0292	0.40	0.09
APR 17,84	APR 15,84	825.0	5.4	G 4.95	G 5.14	0.0256	0.30	0.05
APR 18,84	APR 17,84	9.0	*****	*****	*****	*****	*****	*****
APR 21,84	APR 20,84	20.0	*****	*****	3.36	G 0.5460	*****	*****
APR 24,84	APR 23,84	482.0	9.2	4.70	4.89	0.0348	0.70	0.09
APR 25,84	APR 24,84	20.0	*****	*****	4.62	0.0516	*****	*****
APR 29,84	APR 28,84	60.0	*****	*****	4.13	0.1428	*****	*****
APR 30,84	APR 29,84	262.0	48.5	4.11	4.20	0.1210	6.05	0.76
MAY 1,84	APR 30,84	113.0	22.3	*****	*****	0.0218	3.40	0.34
MAY 2,84	MAY 1,84	102.0	4.0	*****	*****	0.0186	0.40	0.03
MAY 4,84	MAY 3,84	144.0	21.5	*****	4.39	0.0800	1.70	0.32
MAY 6,84	MAY 4,84	174.0	32.6	4.16	4.21	0.1094	2.75	0.40
MAY 8,84	MAY 7,84	250.0	> 100.0	3.67	3.72	0.2780	11.20	G 2.88
MAY 9,84	MAY 8,84	1280.0	17.5	4.43	4.51	0.0606	1.70	0.21
MAY 10,84	MAY 9,84	83.0	*****	*****	4.73	0.0508	1.40	0.15
MAY 12,84	MAY 11,84	454.0	66.3	3.93	3.95	D 0.1722	6.65	1.03
MAY 18,84	MAY 17,84	7.0	*****	*****	*****	*****	*****	*****
MAY 22,84	MAY 21,84	371.0	69.3	3.86	3.92	0.1644	6.00	1.02
MAY 23,84	MAY 22,84	3207.0	24.9	4.39	4.48	0.0570	3.05	0.42
MAY 24,84	MAY 23,84	151.0	17.1	*****	4.67	0.0608	2.65	0.17
MAY 25,84	MAY 24,84	12.0	*****	*****	*****	*****	*****	*****
MAY 26,84	MAY 25,84	1385.0	29.2	4.22	4.28	0.0788	2.80	0.42
MAY 29,84	MAY 28,84	638.0	12.0	4.59	4.69	0.0404	1.05	0.12
MAY 30,84	MAY 29,84	172.0	14.3	4.50	4.60	0.0478	1.00	0.23
MAY 31,84	MAY 30,84	55.0	*****	*****	4.82	0.0386	1.20	0.17
JUN 3,84	JUN 2,84	23.0	*****	*****	4.41	0.0672	*****	*****
JUN 7,84	JUN 6,84	153.0	39.1	*****	4.32	0.0808	3.70	0.80
JUN 8,84	JUN 7,84	640.0	36.0	4.13	4.30	0.0790	4.10	0.38
JUN 11,84	JUN 10,84	292.0	24.7	4.60	G 5.58	0.0372	3.75	0.34
JUN 13,84	JUN 12,84	243.0	62.3	3.87	3.97	0.1366	4.80	1.03

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	0.10	0.14	0.015	<T 0.015	0.030	0.262	0.0871
MAR 17,84	MAR 16,84	0.03	0.28	D 0.015	0.020	0.160	0.020	0.0331
MAR 22,84	MAR 21,84	0.03	0.09	0.015	<T 0.005	0.045	0.076	0.0240
MAR 23,84	MAR 22,84	0.03	0.09	0.010	<T 0.005	0.030	0.118	0.0724
APR 5,84	APR 4,84	0.09	0.07	0.015	<T 0.005	0.015	0.018	0.0191
APR 6,84	APR 5,84	0.07	0.15	0.015	<T 0.015	0.065	0.016	0.0468
APR 7,84	APR 6,84	*****	*****	*****	*****	*****	*****	0.0186
APR 14,84	APR 13,84	0.15	0.18	0.020	0.065	0.055	0.530	0.0977
APR 15,84	APR 14,84	0.03	0.02	<T 0.005	0.020	0.025	0.060	0.0078
APR 17,84	APR 15,84	<T 0.02	<W 0.01	<T 0.005	<W 0.005	<T 0.010	0.020	G 0.0072
APR 18,84	APR 17,84	*****	*****	*****	*****	*****	*****	*****
APR 21,84	APR 20,84	*****	*****	*****	*****	*****	*****	0.4365
APR 24,84	APR 23,84	0.06	0.03	<W 0.005	<T 0.010	<T 0.010	0.065	0.0129
APR 25,84	APR 24,84	*****	*****	*****	*****	*****	*****	0.0240
APR 29,84	APR 28,84	*****	*****	*****	*****	*****	1.550	0.0741
APR 30,84	APR 29,84	G 1.00	0.54	G 0.100	G 0.280	0.260	1.000	0.0631
MAY 1,84	APR 30,84	G 2.60	0.42	B 0.750	B 0.395	G 0.330	0.395	*****
MAY 2,84	MAY 1,84	0.23	0.15	0.065	0.045	0.075	<W 0.005	*****
MAY 4,84	MAY 3,84	0.35	0.28	0.070	0.110	0.130	0.085	0.0407
MAY 6,84	MAY 4,84	0.24	0.15	0.045	0.045	0.080	0.175	0.0617
MAY 8,84	MAY 7,84	G 1.58	0.57	0.310	0.145	0.180	G 2.000	0.1905
MAY 9,84	MAY 8,84	0.17	0.10	0.035	0.030	0.055	0.150	0.0309
MAY 10,84	MAY 9,84	0.21	0.18	0.050	0.145	0.115	0.230	0.0186
MAY 12,84	MAY 11,84	0.62	0.37	0.065	0.075	0.055	0.945	0.1122
MAY 18,84	MAY 17,84	*****	*****	*****	*****	*****	*****	*****
MAY 22,84	MAY 21,84	0.18	0.33	0.045	0.065	0.155	0.645	0.1202
MAY 23,84	MAY 22,84	0.17	0.16	0.040	0.045	0.065	0.670	0.0331
MAY 24,84	MAY 23,84	0.18	0.10	0.100	G 0.830	0.025	0.160	0.0214
MAY 25,84	MAY 24,84	*****	*****	*****	*****	*****	*****	*****
MAY 26,84	MAY 25,84	0.17	0.10	0.030	0.030	0.020	0.370	0.0525
MAY 29,84	MAY 28,84	0.05	0.08	0.010	0.035	0.015	0.075	0.0204
MAY 30,84	MAY 29,84	0.08	0.13	0.015	0.045	0.080	0.060	0.0251
MAY 31,84	MAY 30,84	*****	0.05	*****	*****	*****	*****	0.0151
JUN 3,84	JUN 2,84	*****	*****	*****	*****	*****	*****	0.0389
JUN 7,84	JUN 6,84	0.75	0.36	0.185	G 0.195	0.170	0.500	0.0479
JUN 8,84	JUN 7,84	0.33	0.10	0.045	0.040	0.055	0.600	0.0501
JUN 11,84	JUN 10,84	1.04	0.36	0.230	G 0.200	0.250	0.710	G 0.0026
JUN 13,84	JUN 12,84	0.49	0.26	0.130	0.030	0.075	0.420	0.1072



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JUN 18,84	JUN 17,84	900 820	230 530	1	5.6	1	56424	2	1	109	
JUN 19,84	JUN 18,84	820 830	1130 1330	1	2.6	1	56427	2	1	97	
JUN 24,84	JUN 23,84	900 900	600 900	1	8.8	1	56431	2	1	142	N
JUN 25,84	JUN 24,84	900 830	900 1200	1	5.0	1	56434	2	1	28	N
JUN 26,84	JUN 25,84	830 830	830 1200	1	0.4	1	56437	2	1	93	
JUN 27,84	JUN 26,84	830 830	600 800	1	1.7	1	56440	2	1	98	
JUN 28,84	JUN 27,84	830 820	1030 1600	1	19.7	1	56443	2	1	101	
JUL 4,84	JUL 3,84	830 830	400 600	1	1.0	1	56448	2	1	95	
JUL 7,84	JUL 6,84	830 900	1030 1300	1	13.0	1	56451	2	1	103	
JUL 8,84	JUL 7,84	900 900	1200 1300	1	0.6	1	56454	2	1	205	N
JUL 9,84	JUL 8,84	900 730	600 610	1	0.4	1	56457	2	1	23	E N
JUL 11,84	JUL 10,84	730 730	600 730	1	12.6	1	56460	2	1	132	N
JUL 12,84	JUL 11,84	730 730	730 2400	1	18.7	1	56463	2	1	82	
JUL 14,84	JUL 13,84	730 900	330 530	1	4.2	1	56466	2	1	105	H
JUL 15,84	JUL 14,84	900 900	700 800	1	0.4	1	56469	2	1	89	
JUL 16,84	JUL 15,84	900 730	2000 2400	1	8.4	1	56472	2	1	102	
JUL 18,84	JUL 17,84	730 730	1900 2400	1	4.0	1	56475	2	1	95	N
JUL 19,84	JUL 18,84	730 730	1700 2400	1	3.4	1	56478	2	1	105	
JUL 21,84	JUL 20,84	740 900	1330 1500	1	1.8	1	56481	2	1	94	
JUL 24,84	JUL 23,84	750 730	1700 1730	1	0.4	1	56484	2	1	3	E N
JUL 26,84	JUL 25,84	800 800	700 730	1	0.2	1	56487	2	1	132	N
JUL 27,84	JUL 26,84	800 730	1530 1630	1	13.8	1	56490	2	1	112	NM
AUG 1,84	JUL 31,84	800 900	600 900	1	2.7	1	56495	2	1	91	
AUG 2,84	AUG 1,84	900 730	900 1800	1	7.4	1	56498	2	1	99	
AUG 3,84	AUG 2,84	730 745	2400 200	1	0.4	1	56501	2	1	****	EK
AUG 7,84	AUG 6,84	900 715	****	1	0.2	1	56504	2	1	54	E
AUG 8,84	AUG 7,84	715 730	1530 1600	1	1.6	1	56507	2	1	116	
AUG 9,84	AUG 8,84	730 900	****	1	0.2	1	56510	2	1	23	E N
AUG 10,84	AUG 9,84	900 745	****	1	0.4	1	56513	2	1	62	
AUG 12,84	AUG 11,84	945 900	530 830	1	1.0	1	56516	2	1	81	
AUG 13,84	AUG 12,84	900 800	1700 2130	1	1.2	1	56519	2	1	102	
AUG 14,84	AUG 13,84	800 730	900 1500	1	2.1	1	56522	2	1	95	
AUG 15,84	AUG 14,84	730 730	1900 2100	1	7.0	1	56525	2	1	103	
AUG 16,84	AUG 15,84	730 750	2400 100	1	2.0	1	56529	2	1	87	
AUG 19,84	AUG 18,84	900 900	30 430	1	4.0	1	56532	2	1	102	
AUG 22,84	AUG 21,84	900 900	****	1	****	1	56535	2	1	****	E
AUG 23,84	AUG 22,84	900 730	2230 100	1	1.2	1	56538	2	1	120	N
AUG 24,84	AUG 23,84	730 745	730 830	1	0.8	1	56541	2	1	54	
AUG 29,84	AUG 28,84	745 800	600 700	1	0.6	1	56544	2	1	104	
AUG 30,84	AUG 29,84	800 800	630 800	1	3.6	1	56547	2	1	122	N

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JUN 18,84	JUN 17,84	392.0	D 37.3	4.13	4.19	0.0952	3.20	0.47
JUN 19,84	JUN 18,84	163.0	19.0	4.43	4.53	0.0496	2.05	0.33
JUN 24,84	JUN 23,84	802.0	28.0	4.18	4.18	0.0800	3.15	0.26
JUN 25,84	JUN 24,84	92.0	*****	*****	3.73	0.2160	9.90	1.24
JUN 26,84	JUN 25,84	24.0	*****	*****	4.59	0.0472	*****	*****
JUN 27,84	JUN 26,84	107.0	56.1	*****	3.95	0.1392	6.10	0.81
JUN 28,84	JUN 27,84	1282.0	30.4	4.20	4.27	0.0746	2.90	0.36
JUL 4,84	JUL 3,84	61.0	*****	*****	3.37	G 0.4820	12.80	0.28
JUL 7,84	JUL 6,84	865.0	15.7	4.44	4.57	0.0508	1.50	0.24
JUL 8,84	JUL 7,84	79.0	*****	*****	4.85	0.0338	0.65	0.07
JUL 9,84	JUL 8,84	6.0	*****	*****	*****	*****	*****	*****
JUL 11,84	JUL 10,84	1074.0	22.0	4.22	4.29	0.0670	2.00	0.26
JUL 12,84	JUL 11,84	989.0	16.7	4.32	4.46	0.0556	2.20	0.10
JUL 14,84	JUL 13,84	283.0	15.6	4.59	4.80	0.0386	1.95	0.40
JUL 15,84	JUL 14,84	23.0	*****	*****	3.41	G 0.4640	*****	*****
JUL 16,84	JUL 15,84	552.0	50.3	3.90	3.94	0.1468	5.90	0.55
JUL 18,84	JUL 17,84	245.0	49.7	4.00	4.01	0.1304	5.75	1.10
JUL 19,84	JUL 18,84	230.0	25.0	4.25	4.20	0.0782	2.80	0.11
JUL 21,84	JUL 20,84	109.0	45.7	*****	4.05	D 0.1102	5.30	1.21
JUL 24,84	JUL 23,84	1.0	*****	*****	*****	*****	*****	*****
JUL 26,84	JUL 25,84	17.0	*****	*****	4.33	0.0816	*****	*****
JUL 27,84	JUL 26,84	999.0	8.5	4.55	4.66	0.0384	0.10	0.04
AUG 1,84	JUL 31,84	158.0	27.1	*****	4.26	D 0.0734	3.05	0.47
AUG 2,84	AUG 1,84	474.0	17.4	4.35	4.40	0.0570	2.15	0.10
AUG 3,84	AUG 2,84	*****	*****	*****	*****	*****	*****	*****
AUG 7,84	AUG 6,84	7.0	*****	*****	*****	*****	*****	*****
AUG 8,84	AUG 7,84	120.0	19.1	*****	4.39	0.0642	2.30	0.14
AUG 9,84	AUG 8,84	3.0	*****	*****	*****	*****	*****	*****
AUG 10,84	AUG 9,84	16.0	*****	*****	4.10	0.1062	*****	*****
AUG 12,84	AUG 11,84	52.0	*****	*****	4.20	0.0808	1.40	0.72
AUG 13,84	AUG 12,84	79.0	*****	*****	3.80	0.1794	6.70	0.60
AUG 14,84	AUG 13,84	128.0	28.8	*****	4.20	0.0808	2.85	0.30
AUG 15,84	AUG 14,84	464.0	18.6	4.34	4.34	0.0580	1.60	0.20
AUG 16,84	AUG 15,84	112.0	25.0	*****	4.55	0.0456	3.50	0.62
AUG 19,84	AUG 18,84	262.0	17.5	4.41	4.50	0.0518	1.40	0.23
AUG 22,84	AUG 21,84	1.0	*****	*****	*****	*****	*****	*****
AUG 23,84	AUG 22,84	93.0	95.3	*****	3.70	0.2260	9.30	1.03
AUG 24,84	AUG 23,84	28.0	*****	*****	4.51	0.0560	*****	*****
AUG 29,84	AUG 28,84	40.0	*****	*****	3.64	G 0.2860	11.10	1.71
AUG 30,84	AUG 29,84	282.0	45.2	4.10	4.24	0.0880	4.40	0.80



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JUN 18,84	JUN 17,84	0.09	0.09	0.010	0.030	0.030	0.520	0.0646
JUN 19,84	JUN 18,84	0.04	0.09	0.010	0.035	0.025	0.495	0.0295
JUN 24,84	JUN 23,84	0.04	0.13	D 0.010	0.025	0.015	0.190	0.0661
JUN 25,84	JUN 24,84	0.35	0.32	0.045	0.070	0.100	1.400	0.1862
JUN 26,84	JUN 25,84	*****	*****	*****	*****	*****	*****	0.0257
JUN 27,84	JUN 26,84	0.49	0.21	0.095	0.040	0.020	0.525	0.1122
JUN 28,84	JUN 27,84	0.09	0.10	0.020	<T 0.015	<T 0.005	0.295	0.0537
JUL 4,84	JUL 3,84	*****	0.59	*****	*****	*****	D 1.600	0.4266
JUL 7,84	JUL 6,84	0.07	0.04	0.010	<T 0.015	<W 0.005	0.155	0.0269
JUL 8,84	JUL 7,84	*****	0.07	*****	*****	*****	0.060	0.0141
JUL 9,84	JUL 8,84	*****	*****	*****	*****	*****	*****	*****
JUL 11,84	JUL 10,84	0.07	0.07	0.010	<T 0.015	<W 0.005	0.110	0.0513
JUL 12,84	JUL 11,84	0.03	0.13	0.005	0.055	0.085	0.240	0.0347
JUL 14,84	JUL 13,84	0.56	0.08	0.105	0.025	0.015	0.390	0.0158
JUL 15,84	JUL 14,84	*****	*****	*****	*****	*****	*****	0.3890
JUL 16,84	JUL 15,84	0.27	0.11	0.035	0.020	<T 0.010	0.400	0.1148
JUL 18,84	JUL 17,84	0.95	0.24	0.190	0.080	0.025	0.655	0.0977
JUL 19,84	JUL 18,84	0.04	0.09	0.015	0.025	<T 0.005	0.040	0.0631
JUL 21,84	JUL 20,84	1.07	0.19	0.230	0.050	0.160	0.540	0.0891
JUL 24,84	JUL 23,84	*****	*****	*****	*****	*****	*****	*****
JUL 26,84	JUL 25,84	*****	*****	*****	*****	*****	*****	0.0468
JUL 27,84	JUL 26,84	<W 0.01	0.08	<W 0.005	<T 0.010	<W 0.005	0.010	0.0219
AUG 1,84	JUL 31,84	0.37	0.14	0.095	0.030	0.015	0.270	0.0550
AUG 2,84	AUG 1,84	<W 0.01	0.10	<W 0.005	<T 0.010	<W 0.005	0.220	0.0398
AUG 3,84	AUG 2,84	*****	*****	*****	*****	*****	*****	*****
AUG 7,84	AUG 6,84	*****	*****	*****	*****	*****	*****	*****
AUG 8,84	AUG 7,84	0.03	0.09	0.005	0.040	0.015	0.380	0.0407
AUG 9,84	AUG 8,84	*****	*****	*****	*****	*****	*****	*****
AUG 10,84	AUG 9,84	*****	*****	*****	*****	*****	*****	0.0794
AUG 12,84	AUG 11,84	*****	0.15	*****	*****	*****	0.090	0.0631
AUG 13,84	AUG 12,84	0.10	0.17	0.010	0.050	0.040	0.425	0.1585
AUG 14,84	AUG 13,84	0.04	0.09	<W 0.005	0.020	0.020	0.230	0.0631
AUG 15,84	AUG 14,84	<T 0.02	0.06	<W 0.005	<W 0.005	<T 0.010	0.085	0.0457
AUG 16,84	AUG 15,84	0.96	0.10	0.150	0.045	<W 0.005	0.500	0.0282
AUG 19,84	AUG 18,84	0.05	0.07	0.005	<T 0.005	<T 0.005	0.115	0.0316
AUG 22,84	AUG 21,84	*****	*****	*****	*****	*****	*****	*****
AUG 23,84	AUG 22,84	0.48	0.26	0.100	D 0.150	0.080	0.640	0.1995
AUG 24,84	AUG 23,84	*****	*****	*****	*****	*****	*****	0.0309
AUG 29,84	AUG 28,84	*****	0.28	*****	*****	*****	*****	0.2291
AUG 30,84	AUG 29,84	D 0.70	0.16	0.185	0.100	0.090	0.590	0.0575

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 31,84	AUG 30,84	800 830	800 930	1	3.6	1	56550	2	1	76	
SEP 3,84	SEP 2,84	900 900	1000 400	1	21.8	1	56553	2	1	105	
SEP 6,84	SEP 5,84	800 800	1200 1600	1	0.6	1	56558	2	1	85	
SEP 10,84	SEP 9,84	900 800	1600 700	1	21.8	1	56561	2	1	103	
SEP 11,84	SEP 10,84	800 800	1530 1630	1	23.1	1	56564	2	1	105	
SEP 12,84	SEP 11,84	800 800	900 930	1	1.0	1	56567	2	1	54	
SEP 13,84	SEP 12,84	800 830	430 830	1	21.2	1	56570	2	1	103	
SEP 14,84	SEP 13,84	830 750	830 1030	1	0.8	1	56573	2	1	33	N
SEP 17,84	SEP 16,84	900 800	1130 1430	1	3.4	1	56576	2	1	87	N
SEP 23,84	SEP 22,84	900 900	****	1	0.6	1	56580	2	1	75	
SEP 24,84	SEP 23,84	900 800	1100 2100	1	1.4	1	56583	2	1	83	
SEP 25,84	SEP 24,84	800 800	500 800	1	0.4	1	56586	2	1	81	
SEP 26,84	SEP 25,84	800 800	1200 1300	1	14.2	1	56589	2	1	104	
SEP 28,84	SEP 27,84	800 740	****	1	0.4	1	56592	2	1	31	E N
SEP 29,84	SEP 28,84	740 900	1600 500	1	7.4	1	56595	2	1	100	
OCT 3,84	OCT 2,84	800 830	200 600	1	1.4	1	56598	2	1	104	
OCT 4,84	OCT 3,84	830 730	1100 1500	1	1.2	1	56601	2	1	70	Q
OCT 5,84	OCT 4,84	730 800	1500 2200	1	1.8	1	56604	2	1	97	
OCT 8,84	OCT 7,84	800 1100	1700 1100	1	8.4	1	56607	2	1	88	
OCT 9,84	OCT 8,84	1100 800	1100 1115	1	0.2	1	56610	2	1	109	
OCT 10,84	OCT 9,84	800 800	****	1	0.2	1	56613	2	1	132	N
OCT 18,84	OCT 17,84	800 800	1500 330	1	6.4	1	56617	2	1	95	
OCT 19,84	OCT 18,84	800 800	****	1	0.2	1	56620	2	1	****	EK
OCT 20,84	OCT 19,84	800 900	1200 1600	1	4.3	1	56623	2	1	122	N
OCT 21,84	OCT 20,84	900 900	530 900	1	7.0	1	56626	2	1	106	
OCT 22,84	OCT 21,84	900 815	900 1200	1	1.6	1	56629	2	1	53	
OCT 23,84	OCT 22,84	815 800	300 400	1	0.4	1	56632	2	1	89	
OCT 24,84	OCT 23,84	800 800	1200 1300	1	0.6	1	56635	2	1	64	
OCT 26,84	OCT 25,84	800 800	1730 130	1	5.0	1	56638	2	1	102	
OCT 27,84	OCT 26,84	800 900	900 1000	1	1.4	1	56641	2	1	61	
OCT 28,84	OCT 27,84	900 900	1130 1530	1	7.4	1	56644	2	1	103	
OCT 31,84	OCT 30,84	730 745	2000 2100	1	0.8	1	56647	2	1	54	
NOV 1,84	OCT 31,84	745 750	130 230	1	0.9	1	56650	2	1	88	
NOV 2,84	NOV 1,84	750 730	1300 2030	3	8.8	1	56653	2	1	95	Q
NOV 3,84	NOV 2,84	730 930	730 1500	2	1.6	1	56656	2	1	****	EK
NOV 5,84	NOV 4,84	800 800	930 1600	1	31.6	1	56659	2	1	105	
NOV 6,84	NOV 5,84	800 810	2400 100	3	1.6	2	56664	2	1	117	
NOV 7,84	NOV 6,84	810 830	810 1200	2	0.3	2	56667	2	1	46	E N
NOV 10,84	NOV 9,84	815 825	1630 700	1	8.6	2	56670	2	1	101	
NOV 11,84	NOV 10,84	825 820	100 820	3	20.5	2	56672	2	1	113	

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 31,84	AUG 30,84	176.0	22.1	4.26	4.45	0.0590	1.65	0.40
SEP 3,84	SEP 2,84	1469.0	17.7	4.33	4.50	0.0530	1.75	0.11
SEP 6,84	SEP 5,84	33.0	*****	*****	*****	*****	0.95	0.10
SEP 10,84	SEP 9,84	1451.0	26.8	4.28	4.35	0.0700	2.95	0.39
SEP 11,84	SEP 10,84	1558.0	21.2	4.29	4.44	0.0604	2.00	0.29
SEP 12,84	SEP 11,84	35.0	*****	*****	4.83	0.0406	1.80	0.51
SEP 13,84	SEP 12,84	1407.0	18.4	4.31	4.44	0.0550	1.50	0.27
SEP 14,84	SEP 13,84	17.0	*****	*****	3.40	B 0.5540	*****	*****
SEP 17,84	SEP 16,84	191.0	11.0	4.52	4.76	0.0386	1.10	0.06
SEP 23,84	SEP 22,84	29.0	*****	*****	3.81	0.2100	10.60	2.13
SEP 24,84	SEP 23,84	75.0	*****	*****	3.74	0.2360	10.20	0.96
SEP 25,84	SEP 24,84	21.0	*****	*****	3.28	G 0.6860	*****	*****
SEP 26,84	SEP 25,84	950.0	30.6	4.07	4.29	0.0790	3.00	0.41
SEP 28,84	SEP 27,84	8.0	*****	*****	*****	*****	*****	*****
SEP 29,84	SEP 28,84	476.0	41.6	3.96	4.06	0.1116	2.20	0.92
OCT 3,84	OCT 2,84	94.0	*****	*****	G 6.79	0.0246	4.85	1.25
OCT 4,84	OCT 3,84	54.0	*****	*****	G 7.25	0.0216	3.30	0.55
OCT 5,84	OCT 4,84	113.0	15.8	*****	4.85	0.0412	2.10	0.16
OCT 8,84	OCT 7,84	475.0	78.5	3.68	3.73	0.2180	7.00	0.91
OCT 9,84	OCT 8,84	14.0	*****	*****	*****	*****	*****	*****
OCT 10,84	OCT 9,84	17.0	*****	*****	*****	*****	*****	*****
OCT 18,84	OCT 17,84	393.0	56.0	3.81	3.96	0.1422	4.40	0.85
OCT 19,84	OCT 18,84	*****	*****	*****	*****	*****	*****	*****
OCT 20,84	OCT 19,84	339.0	54.5	3.88	3.92	0.1400	4.10	0.68
OCT 21,84	OCT 20,84	476.0	45.5	3.96	3.99	0.1260	3.95	0.42
OCT 22,84	OCT 21,84	55.0	*****	*****	3.83	0.1834	5.50	0.98
OCT 23,84	OCT 22,84	23.0	*****	*****	4.33	0.0760	*****	*****
OCT 24,84	OCT 23,84	25.0	*****	*****	4.28	0.0798	*****	*****
OCT 26,84	OCT 25,84	327.0	11.0	4.54	4.76	0.0396	0.90	0.29
OCT 27,84	OCT 26,84	55.0	*****	*****	3.89	D 0.1892	5.35	1.49
OCT 28,84	OCT 27,84	490.0	46.4	3.86	4.05	0.1216	3.60	0.70
OCT 31,84	OCT 30,84	28.0	*****	*****	3.59	G 0.3580	*****	*****
NOV 1,84	OCT 31,84	51.0	*****	*****	4.03	0.1318	4.40	0.77
NOV 2,84	NOV 1,84	539.0	30.0	4.15	4.36	0.0706	3.00	0.58
NOV 3,84	NOV 2,84	*****	*****	*****	*****	*****	*****	*****
NOV 5,84	NOV 4,84	2130.0	23.0	4.20	4.30	0.0634	1.85	0.34
NOV 6,84	NOV 5,84	121.0	13.4	*****	4.56	0.0448	1.40	0.09
NOV 7,84	NOV 6,84	9.0	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	559.0	39.3	4.09	D 4.09	0.1062	2.40	0.73
NOV 11,84	NOV 10,84	1493.0	20.7	D 4.43	D 4.43	B 5.4600	1.50	0.39

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 31,84	AUG 30,84	0.10	0.10	0.015	0.045	0.040	0.175	0.0355
SEP 3,84	SEP 2,84	<W 0.01	0.04	<W 0.005	<W 0.005	<W 0.005	0.085	0.0316
SEP 6,84	SEP 5,84	*****	0.11	*****	*****	*****	*****	*****
SEP 10,84	SEP 9,84	0.25	0.08	0.040	<T 0.005	0.035	0.270	0.0447
SEP 11,84	SEP 10,84	0.03	0.05	<W 0.005	<W 0.005	<W 0.005	0.200	0.0363
SEP 12,84	SEP 11,84	*****	0.24	*****	*****	*****	*****	0.0148
SEP 13,84	SEP 12,84	0.05	0.08	<W 0.005	<T 0.005	0.015	0.080	0.0363
SEP 14,84	SEP 13,84	*****	*****	*****	*****	*****	*****	0.3981
SEP 17,84	SEP 16,84	0.03	0.05	<W 0.005	<W 0.005	<W 0.005	0.040	0.0174
SEP 23,84	SEP 22,84	*****	0.64	*****	*****	*****	*****	0.1549
SEP 24,84	SEP 23,84	*****	0.25	*****	*****	*****	1.150	0.1820
SEP 25,84	SEP 24,84	*****	*****	*****	*****	*****	*****	0.5248
SEP 26,84	SEP 25,84	0.03	0.10	0.005	<T 0.010	0.025	0.415	0.0513
SEP 28,84	SEP 27,84	*****	*****	*****	*****	*****	*****	*****
SEP 29,84	SEP 28,84	0.12	0.16	0.015	0.020	<T 0.010	0.315	0.0871
OCT 3,84	OCT 2,84	G 2.17	0.27	G 0.475	G 0.275	0.080	1.000	G 0.0002
OCT 4,84	OCT 3,84	*****	0.13	*****	*****	*****	0.615	G 0.0001
OCT 5,84	OCT 4,84	0.16	0.09	0.030	0.040	0.035	0.445	0.0141
OCT 8,84	OCT 7,84	0.08	0.22	0.015	0.045	0.020	0.585	0.1862
OCT 9,84	OCT 8,84	*****	*****	*****	*****	*****	*****	*****
OCT 10,84	OCT 9,84	*****	*****	*****	*****	*****	*****	*****
OCT 18,84	OCT 17,84	*****	0.14	0.020	0.070	D 0.075	0.310	0.1096
OCT 19,84	OCT 18,84	*****	*****	*****	*****	*****	*****	*****
OCT 20,84	OCT 19,84	0.11	0.27	0.015	0.040	0.075	0.245	0.1202
OCT 21,84	OCT 20,84	0.11	0.20	0.015	0.050	0.090	0.240	0.1023
OCT 22,84	OCT 21,84	*****	0.25	*****	*****	*****	0.560	0.1479
OCT 23,84	OCT 22,84	*****	*****	*****	*****	*****	*****	0.0468
OCT 24,84	OCT 23,84	*****	*****	*****	*****	*****	*****	0.0525
OCT 26,84	OCT 25,84	0.26	0.05	0.030	D 0.110	<W 0.005	D 0.125	0.0174
OCT 27,84	OCT 26,84	*****	0.36	*****	*****	*****	0.310	0.1288
OCT 28,84	OCT 27,84	0.09	0.25	0.030	0.050	0.095	0.370	0.0891
OCT 31,84	OCT 30,84	*****	*****	*****	*****	*****	*****	0.2570
NOV 1,84	OCT 31,84	*****	0.19	*****	*****	*****	0.275	0.0933
NOV 2,84	NOV 1,84	0.42	0.12	G 0.095	0.055	0.020	0.400	0.0437
NOV 3,84	NOV 2,84	*****	*****	*****	*****	*****	*****	*****
NOV 5,84	NOV 4,84	<W 0.01	0.06	<W 0.005	<T 0.005	0.015	0.210	0.0501
NOV 6,84	NOV 5,84	<W 0.01	0.07	<W 0.005	0.050	0.035	0.110	0.0275
NOV 7,84	NOV 6,84	*****	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	0.09	0.17	0.015	0.025	0.040	0.210	D 0.0813
NOV 11,84	NOV 10,84	0.05	0.10	0.010	0.025	0.030	0.240	D 0.0372

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
NOV 12,84	NOV 11,84	820 808	820 2100	3	12.0	2	56674	2	1	72	
NOV 13,84	NOV 12,84	808 820	900 2400	2	0.2	2	56676	2	1	31	E N
NOV 16,84	NOV 15,84	840 830	900 1500	1	17.5	2	56678	2	1	95	
NOV 17,84	NOV 16,84	830 750	****	2	2.4	2	56680	2	1	73	C
NOV 18,84	NOV 17,84	750 950	****	2	0.6	2	56682	2	1	28	E N
NOV 20,84	NOV 19,84	900 830	****	2	0.2	2	56686	2	1	23	E N
NOV 23,84	NOV 22,84	800 830	300 600	2	1.9	2	56688	2	1	111	
NOV 29,84	NOV 28,84	830 830	1300 1800	1	4.6	1	56691	2	1	111	
NOV 30,84	NOV 29,84	830 800	****	1	****	2	56693	2	1	****	E
DEC 1,84	NOV 30,84	800 745	1600 745	1	1.5	2	56695	2	1	124	N
DEC 2,84	DEC 1,84	745 740	****	3	0.2	2	56697	2	1	155	N
DEC 4,84	DEC 3,84	800 850	800 850	2	15.4	2	56699	2	1	81	
DEC 5,84	DEC 4,84	850 845	****	2	1.0	2	56701	2	1	106	
DEC 6,84	DEC 5,84	845 840	2400 600	2	5.0	2	56703	2	1	97	M
DEC 7,84	DEC 6,84	840 815	****	2	0.6	2	56705	2	1	59	
DEC 8,84	DEC 7,84	815 1000	****	3	0.2	2	56707	2	1	46	E N
DEC 9,84	DEC 8,84	1000 1000	****	3	****	2	56709	2	1	****	E
DEC 12,84	DEC 11,84	810 900	830 900	1	0.1	2	56711	2	1	218	E N
DEC 13,84	DEC 12,84	900 900	900 2400	1	17.1	2	56713	2	1	100	
DEC 15,84	DEC 14,84	815 930	****	3	3.8	2	56717	2	1	66	
DEC 17,84	DEC 16,84	930 840	1700 1800	1	0.6	2	56719	2	1	176	N
DEC 18,84	DEC 17,84	840 845	1800 2400	3	0.4	2	56721	2	1	70	
DEC 19,84	DEC 18,84	845 840	845 1600	2	0.1	2	56723	2	1	15	E N
DEC 20,84	DEC 19,84	840 830	****	2	4.6	2	56725	2	1	74	
DEC 22,84	DEC 20,84	830 730	****	2	12.2	2	56727	2	1	79	Q Z
DEC 24,84	DEC 22,84	730 820	****	2	15.0	2	56729	2	1	59	Q Z
DEC 25,84	DEC 24,84	820 800	****	2	5.6	2	56731	2	1	46	N
DEC 26,84	DEC 25,84	800 850	****	2	6.2	2	56733	2	1	76	U F
DEC 28,84	DEC 27,84	830 850	2400 850	3	8.5	2	56735	2	1	77	
DEC 29,84	DEC 28,84	850 930	850 730	1	46.7	2	56737	2	1	99	
DEC 30,84	DEC 29,84	930 930	100 600	3	0.4	2	56741	2	1	15	E N
DEC 31,84	DEC 30,84	930 850	****	2	0.1	2	56743	2	1	15	E N

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
NOV 12,84	NOV 11,84	556.0	18.2	D 4.43	D 4.47	0.0538	1.50	0.17
NOV 13,84	NOV 12,84	4.0	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	1068.0	28.6	4.28	4.28	0.0792	2.10	0.44
NOV 17,84	NOV 16,84	113.0	7.6	*****	5.12	0.0278	0.90	0.06
NOV 18,84	NOV 17,84	11.0	*****	*****	*****	*****	*****	*****
NOV 20,84	NOV 19,84	3.0	*****	*****	*****	*****	*****	*****
NOV 23,84	NOV 22,84	136.0	47.5	*****	4.19	0.0938	3.10	1.65
NOV 29,84	NOV 28,84	328.0	16.8	4.47	4.56	0.0494	1.50	0.20
NOV 30,84	NOV 29,84	3.0	*****	*****	*****	*****	*****	*****
DEC 1,84	NOV 30,84	120.0	66.4	*****	3.91	0.1486	3.10	2.14
DEC 2,84	DEC 1,84	20.0	*****	*****	4.59	0.0508	*****	*****
DEC 4,84	DEC 3,84	800.0	11.9	4.41	4.73	0.0384	0.75	0.25
DEC 5,84	DEC 4,84	68.0	4.0	*****	G 5.49	0.0208	0.20	0.07
DEC 6,84	DEC 5,84	311.0	D 11.9	4.39	4.65	0.0414	0.15	0.38
DEC 7,84	DEC 6,84	23.0	*****	*****	4.38	0.0734	*****	*****
DEC 8,84	DEC 7,84	6.0	*****	*****	*****	*****	*****	*****
DEC 9,84	DEC 8,84	3.0	*****	*****	*****	*****	*****	*****
DEC 12,84	DEC 11,84	14.0	*****	*****	*****	*****	*****	*****
DEC 13,84	DEC 12,84	1097.0	25.2	4.04	4.29	0.0796	1.65	0.29
DEC 15,84	DEC 14,84	161.0	28.0	3.92	4.24	0.0776	1.80	0.45
DEC 17,84	DEC 16,84	68.0	82.8	*****	3.82	0.1914	6.70	1.07
DEC 18,84	DEC 17,84	18.0	*****	*****	4.14	0.1000	*****	*****
DEC 19,84	DEC 18,84	1.0	*****	*****	*****	*****	*****	*****
DEC 20,84	DEC 19,84	221.0	23.8	4.19	4.41	0.0710	1.30	0.78
DEC 22,84	DEC 20,84	623.0	11.8	4.45	4.64	0.0402	0.55	0.22
DEC 24,84	DEC 22,84	576.0	18.9	4.27	4.45	0.0534	0.75	0.53
DEC 25,84	DEC 24,84	166.0	12.4	4.32	4.59	0.0418	0.25	0.34
DEC 26,84	DEC 25,84	304.0	15.9	4.25	4.57	D 0.0450	0.45	0.47
DEC 28,84	DEC 27,84	420.0	25.8	4.01	4.26	0.0724	2.15	0.24
DEC 29,84	DEC 28,84	2974.0	14.2	4.39	4.65	0.0450	1.20	0.21
DEC 30,84	DEC 29,84	4.0	*****	*****	*****	*****	*****	*****
DEC 31,84	DEC 30,84	1.0	*****	*****	*****	*****	*****	*****



ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
NOV 12,84	NOV 11,84	0.03	0.03	0.015	<W 0.005	<T 0.005	0.040	D 0.0339
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	0.08	0.14	0.015	<T 0.010	<T 0.015	0.280	0.0525
NOV 17,84	NOV 16,84	0.19	0.11	0.030	<T 0.010	0.100	<W 0.005	0.0076
NOV 18,84	NOV 17,84	*****	*****	*****	*****	*****	*****	*****
NOV 20,84	NOV 19,84	*****	*****	*****	*****	*****	*****	*****
NOV 23,84	NOV 22,84	0.44	0.22	G 0.095	0.045	0.025	1.300	0.0646
NOV 29,84	NOV 28,84	0.05	0.16	0.010	0.020	0.055	0.130	0.0275
NOV 30,84	NOV 29,84	*****	*****	*****	*****	*****	*****	*****
DEC 1,84	NOV 30,84	G 0.87	0.47	0.070	0.080	0.080	0.870	0.1230
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	0.0257
DEC 4,84	DEC 3,84	0.03	0.05	<W 0.005	<W 0.005	<W 0.005	0.120	0.0186
DEC 5,84	DEC 4,84	*****	0.05	*****	*****	*****	<W 0.005	G 0.0032
DEC 6,84	DEC 5,84	0.03	0.05	<W 0.005	<W 0.005	<W 0.005	<W 0.005	0.0224
DEC 7,84	DEC 6,84	*****	*****	*****	*****	*****	*****	0.0417
DEC 8,84	DEC 7,84	*****	*****	*****	*****	*****	*****	*****
DEC 9,84	DEC 8,84	*****	*****	*****	*****	*****	*****	*****
DEC 12,84	DEC 11,84	*****	*****	*****	*****	*****	*****	*****
DEC 13,84	DEC 12,84	0.04	0.10	<W 0.005	<W 0.005	<W 0.005	0.190	0.0513
DEC 15,84	DEC 14,84	0.06	0.11	0.005	0.030	0.020	0.070	0.0575
DEC 17,84	DEC 16,84	0.33	G 1.59	G 0.150	0.070	G 0.915	0.365	0.1514
DEC 18,84	DEC 17,84	*****	*****	*****	*****	*****	*****	0.0724
DEC 19,84	DEC 18,84	*****	*****	*****	*****	*****	*****	*****
DEC 20,84	DEC 19,84	0.34	0.18	0.060	<W 0.005	0.055	0.360	0.0389
DEC 22,84	DEC 20,84	<T 0.02	0.05	0.015	0.030	<W 0.005	0.045	0.0229
DEC 24,84	DEC 22,84	0.10	0.15	0.020	<W 0.005	0.015	0.185	0.0355
DEC 25,84	DEC 24,84	<W 0.01	0.06	0.010	<W 0.005	<W 0.005	0.020	0.0257
DEC 26,84	DEC 25,84	0.23	0.21	0.040	<W 0.005	0.085	0.005	0.0269
DEC 28,84	DEC 27,84	0.05	0.14	0.015	<T 0.010	0.055	0.115	0.0550
DEC 29,84	DEC 28,84	0.04	0.04	0.010	0.010	0.025	0.220	0.0224
DEC 30,84	DEC 29,84	*****	*****	*****	*****	*****	*****	*****
DEC 31,84	DEC 30,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	800 800	2430 630	2	4.2	2	56845	2	1	60	
JAN 4,84	JAN 3,84	800 730	1300 1430	2	2.6	2	56846	2	1	47	N
JAN 6,84	JAN 5,84	800 730	100 300	2	7.8	2	56847	2	1	70	
JAN 8,84	JAN 7,84	800 800	100 230	2	6.4	2	56848	2	1	20	N
JAN 9,84	JAN 8,84	800 730	2300 130	2	1.6	2	56849	2	1	32	U G
JAN 15,84	JAN 13,84	730 800	2300 200	2	2.6	2	56851	2	1	50	C Z
JAN 18,84	JAN 17,84	700 715	700 1300	2	5.0	2	56853	2	1	75	
JAN 23,84	JAN 22,84	800 730	900 1100	2	2.4	2	56855	2	1	31	N
JAN 24,84	JAN 23,84	730 715	400 600	2	6.6	2	56856	2	1	64	
JAN 25,84	JAN 24,84	715 700	600 700	2	0.6	2	56857	2	1	83	
JAN 26,84	JAN 25,84	700 700	700 900	2	0.2	2	56858	2	1	****	EK
JAN 27,84	JAN 26,84	730 715	400 715	3	6.2	2	56859	2	1	71	C
JAN 31,84	JAN 30,84	800 800	200 300	2	1.4	2	56862	2	1	26	N
FEB 3,84	FEB 2,84	730 730	530 730	3	8.4	2	56863	2	1	85	
FEB 4,84	FEB 3,84	730 730	730 1030	3	17.8	2	56864	2	1	48	B N
FEB 5,84	FEB 4,84	730 830	400 600	2	3.2	2	56865	2	1	63	Q
FEB 6,84	FEB 5,84	830 730	300 400	2	0.4	2	56866	2	1	****	EK
FEB 9,84	FEB 8,84	730 730	1400 1530	2	0.2	2	56867	2	1	101	C
FEB 11,84	FEB 10,84	730 800	400 530	1	2.0	2	56868	2	1	113	
FEB 14,84	FEB 13,84	730 730	800 1000	1	39.6	2	56870	2	1	91	
FEB 17,84	FEB 14,84	730 800	****	1	****	2	56873	2	1	****	Z
FEB 20,84	FEB 19,84	800 730	****	3	3.5	2	56876	2	1	96	
FEB 21,84	FEB 20,84	730 730	630 730	2	0.4	2	56877	2	1	****	EK
FEB 29,84	FEB 28,84	730 730	1300 1700	2	10.2	2	56880	2	1	23	NHM
MAR 6,84	MAR 5,84	730 730	800 1030	3	6.2	2	56882	2	1	49	N
MAR 11,84	MAR 10,84	730 730	1900 2200	2	2.2	2	56883	2	1	12	C N
MAR 14,84	MAR 13,84	830 730	200 330	2	1.2	2	56885	2	1	20	N
MAR 16,84	MAR 15,84	800 830	600 830	1	28.0	2	56886	2	1	98	
MAR 17,84	MAR 16,84	830 800	830 1100	3	7.0	2	56889	2	1	95	
MAR 22,84	MAR 21,84	730 730	1300 1530	3	10.0	2	56890	2	1	94	J
MAR 23,84	MAR 22,84	730 730	1300 1500	3	5.2	2	56891	2	1	59	J
APR 5,84	APR 4,84	730 730	100 300	1	8.8	2	56893	2	1	96	
APR 6,84	APR 5,84	730 730	530 730	1	3.0	2	56894	2	1	80	
APR 7,84	APR 6,84	730 800	2100 2300	2	0.4	2	56895	2	1	113	
APR 14,84	APR 13,84	730 800	1500 1700	1	4.8	1	56896	2	1	95	
APR 15,84	APR 14,84	800 800	1400 1630	1	8.1	1	56897	2	1	101	
APR 16,84	APR 15,84	800 730	1300 1430	1	2.4	1	56898	2	1	70	C
APR 17,84	APR 16,84	730 730	1500 1640	3	11.2	1	56899	2	1	126	NHC
APR 18,84	APR 17,84	730 730	1000 1100	1	1.8	1	56902	2	1	17	N
APR 24,84	APR 23,84	800 730	930 1100	1	5.8	1	56903	2	1	89	



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	164.0	28.4	*****	4.21	0.0830	0.40	1.05
JAN 4,84	JAN 3,84	79.0	*****	*****	4.50	0.0598	1.40	0.77
JAN 6,84	JAN 5,84	354.0	31.5	*****	4.34	0.0710	1.75	1.03
JAN 8,84	JAN 7,84	86.0	*****	*****	G 6.85	0.0174	0.50	0.63
JAN 9,84	JAN 8,84	33.0	*****	*****	4.99	0.1440	1.75	1.29
JAN 15,84	JAN 13,84	84.0	*****	*****	4.27	0.0722	1.45	1.22
JAN 18,84	JAN 17,84	242.0	37.5	3.87	4.18	0.0868	1.30	1.11
JAN 23,84	JAN 22,84	49.0	20.3	*****	4.55	0.0560	1.00	0.64
JAN 24,84	JAN 23,84	274.0	14.8	4.34	4.72	0.0426	0.30	0.64
JAN 25,84	JAN 24,84	32.0	*****	*****	3.87	0.1960	6.75	1.80
JAN 26,84	JAN 25,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	283.0	16.4	4.43	4.62	0.0488	0.45	0.64
JAN 31,84	JAN 30,84	24.0	*****	*****	D 4.96	0.0444	*****	*****
FEB 3,84	FEB 2,84	460.0	51.0	3.77	4.03	0.1272	3.25	1.17
FEB 4,84	FEB 3,84	552.0	31.5	3.98	4.30	0.0780	2.35	0.68
FEB 5,84	FEB 4,84	131.0	38.6	*****	4.21	0.1018	2.25	1.08
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 9,84	FEB 8,84	13.0	*****	*****	G 6.90	0.0174	*****	*****
FEB 11,84	FEB 10,84	145.0	83.0	*****	3.78	0.2120	3.50	1.89
FEB 14,84	FEB 13,84	2324.0	19.0	4.13	4.48	0.0538	1.45	0.25
FEB 17,84	FEB 14,84	58.0	*****	*****	4.03	0.1268	2.70	0.97
FEB 20,84	FEB 19,84	217.0	58.9	3.73	3.98	0.1474	4.75	1.00
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	151.0	3.5	*****	G 5.99	0.0274	0.35	<T 0.01
MAR 6,84	MAR 5,84	195.0	16.5	4.39	4.57	0.0490	1.65	0.38
MAR 11,84	MAR 10,84	18.0	*****	*****	G 5.76	0.0260	*****	*****
MAR 14,84	MAR 13,84	16.0	*****	*****	4.08	0.1052	*****	*****
MAR 16,84	MAR 15,84	1760.0	36.0	3.85	4.10	0.1032	2.55	0.57
MAR 17,84	MAR 16,84	427.0	13.7	4.25	4.62	0.0452	1.50	0.10
MAR 22,84	MAR 21,84	607.0	9.0	4.36	4.80	0.0352	0.70	0.12
MAR 23,84	MAR 22,84	199.0	31.0	3.83	4.20	0.0920	2.65	0.41
APR 5,84	APR 4,84	544.0	8.5	4.24	4.97	0.0414	0.85	0.16
APR 6,84	APR 5,84	154.0	17.5	*****	4.57	0.0600	1.15	0.34
APR 7,84	APR 6,84	29.0	*****	*****	B 6.82	0.0244	*****	*****
APR 14,84	APR 13,84	294.0	46.0	4.01	4.05	0.1260	3.70	0.81
APR 15,84	APR 14,84	527.0	8.0	G 4.95	5.02	0.0330	0.60	0.15
APR 16,84	APR 15,84	108.0	8.8	*****	G 5.19	0.0312	0.95	0.08
APR 17,84	APR 16,84	906.0	6.5	G 4.97	G 5.19	0.0340	0.55	0.06
APR 18,84	APR 17,84	20.0	*****	*****	*****	0.0236	*****	*****
APR 24,84	APR 23,84	331.0	17.7	4.43	4.50	0.0570	1.65	0.23

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	0.06	0.26	0.010	<T 0.015	0.050	0.198	0.0617
JAN 4,84	JAN 3,84	*****	0.17	*****	*****	*****	*****	0.0316
JAN 6,84	JAN 5,84	0.16	0.24	0.030	0.015	0.060	0.800	0.0457
JAN 8,84	JAN 7,84	0.24	0.22	0.050	0.035	0.080	*****	G 0.0001
JAN 9,84	JAN 8,84	*****	G 1.25	*****	*****	*****	*****	0.0102
JAN 15,84	JAN 13,84	*****	G 0.91	*****	*****	*****	*****	0.0537
JAN 18,84	JAN 17,84	0.13	0.33	0.030	0.020	0.065	0.410	0.0661
JAN 23,84	JAN 22,84	*****	0.67	*****	*****	*****	*****	0.0282
JAN 24,84	JAN 23,84	0.13	0.17	0.030	<T 0.010	0.065	D 0.242	0.0191
JAN 25,84	JAN 24,84	*****	G 0.95	*****	*****	*****	*****	0.1349
JAN 26,84	JAN 25,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	0.15	0.13	0.025	0.040	0.045	0.300	0.0240
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	D 0.0110
FEB 3,84	FEB 2,84	0.27	0.31	0.020	0.085	0.165	0.530	0.0933
FEB 4,84	FEB 3,84	0.14	0.16	0.015	0.050	0.070	0.470	0.0501
FEB 5,84	FEB 4,84	0.22	0.31	0.035	0.050	0.095	0.570	0.0617
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 9,84	FEB 8,84	*****	*****	*****	*****	*****	*****	G 0.0001
FEB 11,84	FEB 10,84	0.34	0.77	0.045	0.110	G 0.375	0.250	0.1660
FEB 14,84	FEB 13,84	0.07	0.11	0.015	0.035	0.090	0.118	0.0331
FEB 17,84	FEB 14,84	*****	0.33	*****	*****	*****	0.130	0.0933
FEB 20,84	FEB 19,84	0.29	0.42	0.050	0.045	0.230	0.730	0.1047
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	0.25	0.30	0.045	0.030	0.230	<M 0.002	G 0.0010
MAR 6,84	MAR 5,84	0.42	0.19	0.055	D 0.035	0.125	0.158	0.0269
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	G 0.0017
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	0.0832
MAR 16,84	MAR 15,84	0.11	0.12	0.020	<T 0.015	0.050	0.252	0.0794
MAR 17,84	MAR 16,84	0.08	0.07	0.010	<T 0.015	0.025	D 0.188	0.0240
MAR 22,84	MAR 21,84	0.07	0.07	0.015	<T 0.015	0.045	0.078	0.0158
MAR 23,84	MAR 22,84	0.15	0.56	0.025	0.035	0.045	0.288	0.0631
APR 5,84	APR 4,84	0.19	0.13	0.030	D 0.045	0.055	0.028	0.0107
APR 6,84	APR 5,84	0.10	0.25	0.025	0.075	0.210	0.062	0.0269
APR 7,84	APR 6,84	*****	*****	*****	*****	*****	*****	B 0.0002
APR 14,84	APR 13,84	0.22	0.28	0.035	0.110	0.140	0.420	0.0891
APR 15,84	APR 14,84	0.09	0.15	0.015	0.050	0.085	0.045	0.0095
APR 16,84	APR 15,84	0.23	0.22	0.040	0.075	0.115	0.105	G 0.0065
APR 17,84	APR 16,84	0.06	0.06	0.010	0.030	0.030	0.140	G 0.0065
APR 18,84	APR 17,84	*****	*****	*****	*****	*****	*****	*****
APR 24,84	APR 23,84	0.14	0.15	0.040	D 0.065	0.090	0.060	0.0316

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.		PRECIP START/END HR. HR.		SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE	
APR 25,84	APR 24,84	730	730	730	930	1	1.2	1	56904	2	1	39		N
APR 30,84	APR 29,84	730	730	600	630	1	2.0	1	56905	2	1	85		
MAY 1,84	APR 30,84	730	800	1000	1100	3	5.0	1	56906	2	1	51	FI	
MAY 2,84	MAY 1,84	800	730	1400	1500	2	2.0	1	56907	2	1	24		N
MAY 4,84	MAY 3,84	730	800	500	800	1	4.8	1	56908	2	1	36		N
MAY 5,84	MAY 4,84	800	730	800	1100	1	2.2	1	56909	2	1	75		
MAY 8,84	MAY 7,84	730	730	100	300	1	7.8	1	56910	2	1	95		
MAY 9,84	MAY 8,84	730	730	830	1130	1	20.6	1	56911	2	1	96		
MAY 10,84	MAY 9,84	730	700	1000	1100	1	2.2	1	56914	2	1	51		
MAY 12,84	MAY 11,84	730	800	100	230	1	6.8	1	56915	2	1	93	QG	
MAY 22,84	MAY 21,84	730	700	530	700	1	3.2	1	56920	2	1	93		
MAY 23,84	MAY 22,84	700	700	1530	1600	1	38.8	1	56921	2	1	73	FI	
MAY 25,84	MAY 24,84	700	730	430	500	1	0.6	1	56922	2	1	78		
MAY 26,84	MAY 25,84	730	800	430	530	1	22.8	1	56923	2	1	97		
MAY 29,84	MAY 28,84	700	700	430	700	1	11.4	1	56924	2	1	92		
MAY 30,84	MAY 29,84	700	700	700	900	1	6.3	1	56925	2	1	62		J
MAY 31,84	MAY 30,84	700	700	700	800	1	1.2	1	56926	2	1	20	C	N
JUN 7,84	JUN 6,84	700	700	500	530	1	1.0	1	56927	2	1	59		
JUN 8,84	JUN 7,84	700	700	1730	1800	1	8.6	1	56928	2	1	110		
JUN 12,84	JUN 10,84	700	700	1730	1830	1	****	1	56929	2	1	****	C	HZ
JUN 13,84	JUN 12,84	700	730	430	530	1	4.4	1	56930	2	1	104		
JUN 18,84	JUN 17,84	700	700	430	600	1	****	1	56931	2	1	****		C
JUN 19,84	JUN 18,84	700	700	830	1000	1	2.4	1	56932	2	1	54		
JUN 24,84	JUN 23,84	700	800	630	730	1	7.8	1	56933	2	1	97		
JUN 25,84	JUN 24,84	800	800	330	430	1	5.4	1	56934	2	1	89	B	
JUN 28,84	JUN 27,84	700	700	1030	100	1	33.4	1	56935	2	1	103		
JUL 4,84	JUL 3,84	700	700	400	430	1	1.4	1	56936	2	1	44		N
JUL 7,84	JUL 6,84	700	700	1030	1200	1	14.8	1	56937	2	1	98		
JUL 8,84	JUL 7,84	700	800	700	800	1	2.4	1	56940	2	1	105		
JUL 11,84	JUL 10,84	700	700	530	700	1	13.4	1	56941	2	1	101		
JUL 12,84	JUL 11,84	700	700	700	1000	1	21.4	1	56942	2	1	95		
JUL 14,84	JUL 13,84	700	800	500	545	1	8.4	1	56943	2	1	108		J
JUL 15,84	JUL 14,84	800	800	530	600	1	0.8	1	56944	2	1	56		
JUL 16,84	JUL 15,84	800	700	1830	1930	1	10.1	1	56945	2	1	91		
JUL 18,84	JUL 17,84	700	730	1800	1900	1	22.8	1	56946	2	1	60		
JUL 23,84	JUL 22,84	700	700	1530	1630	1	2.2	1	56948	2	1	73		
JUL 27,84	JUL 26,84	700	700	1430	1500	1	2.2	1	56949	2	1	86		
JUL 31,84	JUL 30,84	700	700	900	930	1	1.2	1	56950	2	1	36		N
AUG 1,84	JUL 31,84	700	800	500	600	1	2.4	1	56951	2	1	86		
AUG 2,84	AUG 1,84	800	700	1200	1500	1	8.2	1	56952	2	1	89		

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 25,84	APR 24,84	30.0	*****	*****	4.96	0.0412	*****	*****
APR 30,84	APR 29,84	110.0	G 96.5	*****	4.06	0.2020	A 14.55	A 2.26
MAY 1,84	APR 30,84	164.0	20.0	*****	4.63	0.0556	2.95	0.24
MAY 2,84	MAY 1,84	31.0	*****	*****	G 7.44	0.0190	*****	*****
MAY 4,84	MAY 3,84	112.0	23.7	*****	4.38	0.0792	2.85	0.36
MAY 5,84	MAY 4,84	106.0	20.5	*****	4.45	D 0.0702	1.75	0.26
MAY 8,84	MAY 7,84	478.0	82.5	3.88	3.92	0.1798	8.15	1.76
MAY 9,84	MAY 8,84	1279.0	D 22.0	4.50	4.51	0.0620	D 2.20	0.30
MAY 10,84	MAY 9,84	73.0	*****	*****	5.00	0.0374	1.50	0.17
MAY 12,84	MAY 11,84	409.0	*****	3.95	*****	*****	*****	*****
MAY 22,84	MAY 21,84	191.0	> 100.0	3.59	3.61	G 0.2960	12.00	1.87
MAY 23,84	MAY 22,84	1827.0	28.4	4.32	4.41	0.0656	3.50	0.48
MAY 25,84	MAY 24,84	30.0	*****	*****	4.29	0.0950	6.15	1.35
MAY 26,84	MAY 25,84	1431.0	25.7	4.27	4.36	0.0706	2.60	0.37
MAY 29,84	MAY 28,84	677.0	13.0	4.54	4.66	0.0466	1.25	0.12
MAY 30,84	MAY 29,84	251.0	9.0	G 5.90	B 6.60	0.0360	1.20	0.17
MAY 31,84	MAY 30,84	16.0	*****	*****	D 5.25	0.0290	*****	*****
JUN 7,84	JUN 6,84	38.0	*****	*****	4.04	0.1542	D 10.50	1.76
JUN 8,84	JUN 7,84	610.0	27.8	4.18	4.36	0.0708	3.45	0.30
JUN 12,84	JUN 10,84	176.0	27.2	4.69	5.14	0.0372	5.10	0.72
JUN 13,84	JUN 12,84	296.0	56.5	3.90	3.98	0.1448	4.95	0.99
JUN 18,84	JUN 17,84	336.0	26.1	4.23	4.19	0.0740	3.10	0.43
JUN 19,84	JUN 18,84	84.0	21.9	*****	4.54	0.0554	D 3.10	0.43
JUN 24,84	JUN 23,84	487.0	19.1	4.37	4.44	0.0532	1.85	0.14
JUN 25,84	JUN 24,84	311.0	60.0	3.82	3.85	0.1666	7.45	0.66
JUN 28,84	JUN 27,84	2219.0	22.8	4.30	4.33	0.0708	2.70	0.29
JUL 4,84	JUL 3,84	40.0	*****	*****	3.37	B *****	10.00	2.00
JUL 7,84	JUL 6,84	935.0	19.8	4.37	4.42	0.0582	1.90	0.40
JUL 8,84	JUL 7,84	162.0	6.1	*****	5.07	0.0260	0.75	0.04
JUL 11,84	JUL 10,84	875.0	25.5	4.15	4.23	0.0782	2.65	0.36
JUL 12,84	JUL 11,84	1314.0	15.2	4.42	4.52	0.0478	2.05	0.13
JUL 14,84	JUL 13,84	586.0	13.3	4.59	5.06	0.0298	1.85	0.38
JUL 15,84	JUL 14,84	29.0	*****	*****	3.66	0.2700	> 10.00	> 2.00
JUL 16,84	JUL 15,84	595.0	46.2	3.94	3.96	0.1338	5.70	0.49
JUL 18,84	JUL 17,84	890.0	17.1	4.41	4.54	0.0488	1.90	0.37
JUL 23,84	JUL 22,84	103.0	45.1	*****	4.15	0.1054	5.45	1.14
JUL 27,84	JUL 26,84	122.0	11.0	*****	4.66	0.0410	1.10	0.08
JUL 31,84	JUL 30,84	28.0	*****	*****	4.88	0.0376	*****	*****
AUG 1,84	JUL 31,84	133.0	28.5	*****	4.25	0.0722	2.95	0.42
AUG 2,84	AUG 1,84	473.0	21.0	4.28	4.33	0.0614	2.55	0.13

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 25,84	APR 24,84	*****	*****	*****	*****	*****	*****	0.0110
APR 30,84	APR 29,84	B 3.00	A 1.70	G 0.330	G 0.830	B 0.960	G 3.100	0.0871
MAY 1,84	APR 30,84	0.48	0.26	G 0.085	0.120	0.145	0.365	0.0234
MAY 2,84	MAY 1,84	*****	*****	*****	*****	*****	*****	G 0.0000
MAY 4,84	MAY 3,84	0.39	0.27	0.075	0.050	0.190	0.070	0.0417
MAY 5,84	MAY 4,84	0.25	0.17	0.040	0.045	D 0.120	0.145	0.0355
MAY 8,84	MAY 7,84	0.90	0.37	0.175	0.095	0.115	1.750	0.1202
MAY 9,84	MAY 8,84	0.26	0.14	0.040	0.025	0.065	0.290	0.0309
MAY 10,84	MAY 9,84	*****	0.33	*****	*****	*****	0.150	0.0100
MAY 12,84	MAY 11,84	*****	*****	*****	*****	*****	*****	*****
MAY 22,84	MAY 21,84	D 0.55	B 0.79	D 0.130	B 0.355	B 0.405	1.350	0.2455
MAY 23,84	MAY 22,84	0.25	0.20	0.060	0.040	0.090	0.650	0.0389
MAY 25,84	MAY 24,84	*****	G 0.87	*****	*****	*****	*****	0.0513
MAY 26,84	MAY 25,84	0.13	0.11	0.020	0.020	D 0.150	0.285	0.0437
MAY 29,84	MAY 28,84	0.07	0.11	0.015	0.045	0.030	0.085	0.0219
MAY 30,84	MAY 29,84	0.10	0.23	0.025	0.105	> 1.000	0.120	B 0.0003
MAY 31,84	MAY 30,84	*****	*****	*****	*****	*****	*****	D 0.0056
JUN 7,84	JUN 6,84	*****	G 0.84	*****	*****	*****	*****	0.0912
JUN 8,84	JUN 7,84	0.29	0.08	0.040	0.030	0.040	0.475	0.0437
JUN 12,84	JUN 10,84	G 1.24	0.44	0.280	G 0.155	0.295	1.000	0.0072
JUN 13,84	JUN 12,84	0.52	0.30	0.135	0.100	0.105	0.370	0.1047
JUN 18,84	JUN 17,84	0.06	0.15	D 0.015	D 0.070	D 0.055	0.520	0.0646
JUN 19,84	JUN 18,84	*****	D 0.32	*****	*****	*****	0.730	0.0288
JUN 24,84	JUN 23,84	0.02	0.08	0.005	0.040	0.030	0.120	0.0363
JUN 25,84	JUN 24,84	0.12	0.22	0.020	0.090	0.065	0.740	0.1413
JUN 28,84	JUN 27,84	0.10	0.07	0.015	0.020	<M 0.005	0.335	0.0468
JUL 4,84	JUL 3,84	*****	0.69	*****	*****	*****	*****	0.4266
JUL 7,84	JUL 6,84	0.10	0.10	0.020	D 0.030	<T 0.015	D 0.330	0.0380
JUL 8,84	JUL 7,84	0.16	0.09	0.025	0.035	0.035	0.025	0.0085
JUL 11,84	JUL 10,84	0.09	0.18	0.010	0.070	0.075	0.205	0.0589
JUL 12,84	JUL 11,84	0.04	0.17	0.005	0.095	0.080	0.275	0.0302
JUL 14,84	JUL 13,84	0.48	0.11	0.080	0.025	<T 0.015	0.445	0.0087
JUL 15,84	JUL 14,84	*****	0.60	*****	*****	*****	*****	0.2188
JUL 16,84	JUL 15,84	0.23	0.16	0.030	0.030	<T 0.015	0.445	0.1096
JUL 18,84	JUL 17,84	0.25	0.13	0.045	0.020	<T 0.010	0.310	0.0288
JUL 23,84	JUL 22,84	1.10	0.20	0.250	0.065	0.185	0.665	0.0708
JUL 27,84	JUL 26,84	0.10	0.09	0.020	0.035	0.045	0.055	0.0219
JUL 31,84	JUL 30,84	*****	*****	*****	*****	*****	*****	0.0132
AUG 1,84	JUL 31,84	0.25	0.23	0.065	0.105	0.105	0.210	0.0562
AUG 2,84	AUG 1,84	0.03	0.10	0.010	D 0.065	D 0.050	0.270	0.0468

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 9,84	AUG 8,84	700 700	**** ****	1	****	1	56594	2	1	****	E
AUG 13,84	AUG 12,84	700 730	1700 1800	1	3.2	1	56956	2	1	73	
AUG 14,84	AUG 13,84	730 700	1900 1930	1	1.4	1	56957	2	1	89	
AUG 15,84	AUG 14,84	700 700	1800 1900	1	19.2	1	56958	2	1	99	
AUG 19,84	AUG 18,84	700 730	300 330	1	4.2	1	56961	2	1	82	
AUG 23,84	AUG 22,84	700 700	2230 2300	1	1.4	1	56962	2	1	36	N
AUG 24,84	AUG 23,84	700 700	745 800	1	1.2	1	56963	2	1	61	
AUG 29,84	AUG 28,84	700 700	430 500	1	1.4	1	56964	2	1	****	E
AUG 31,84	AUG 30,84	700 700	730 900	1	7.2	1	56965	2	1	88	
SEP 3,84	SEP 2,84	700 700	1430 1530	1	18.8	1	56967	2	1	92	
SEP 10,84	SEP 9,84	700 700	1530 1730	1	22.2	1	56971	2	1	99	HM
SEP 11,84	SEP 10,84	700 730	1500 1650	1	30.4	1	56972	2	1	98	
SEP 12,84	SEP 11,84	730 700	900 930	1	1.0	1	56973	2	1	43	N
SEP 13,84	SEP 12,84	700 730	530 730	1	21.2	1	56974	2	1	63	N
SEP 14,84	SEP 13,84	730 700	730 830	1	5.4	1	56975	2	1	94	
SEP 17,84	SEP 16,84	730 730	1430 1500	3	11.0	1	56976	2	1	98	
SEP 23,84	SEP 22,84	715 730	430 500	1	0.4	1	56978	2	1	237	N
SEP 26,84	SEP 25,84	700 700	2130 2200	1	12.8	1	56980	2	1	100	CQ
SEP 29,84	SEP 28,84	700 800	1600 1800	1	8.2	1	56981	2	1	89	
OCT 3,84	OCT 2,84	700 700	430 530	1	2.4	1	56982	2	1	64	
OCT 4,84	OCT 3,84	700 700	830 1000	1	3.8	1	56983	2	1	89	CQ
OCT 5,84	OCT 4,84	700 700	1530 1730	1	2.4	1	56984	2	1	60	J
OCT 8,84	OCT 7,84	700 800	530 800	1	8.6	1	56985	2	1	83	HCM
OCT 9,84	OCT 8,84	800 700	800 930	1	2.6	1	56986	2	1	58	
OCT 18,84	OCT 17,84	830 730	1500 1600	1	9.6	1	56989	2	1	86	
OCT 20,84	OCT 19,84	700 800	1100 1215	1	8.0	1	56990	2	1	92	
OCT 21,84	OCT 20,84	800 800	630 800	1	2.0	1	56991	2	1	88	
OCT 22,84	OCT 21,84	800 800	800 1030	1	6.2	1	56992	2	1	91	
OCT 26,84	OCT 25,84	700 700	1730 1830	1	5.2	1	56994	2	1	89	
OCT 27,84	OCT 26,84	700 730	1400 1530	1	1.6	1	56995	2	1	39	C
OCT 28,84	OCT 27,84	730 800	1530 1630	1	7.2	1	56996	2	1	84	N
OCT 31,84	OCT 30,84	700 730	2000 2030	1	0.8	1	56997	2	1	31	N
NOV 2,84	NOV 1,84	700 700	1500 1700	3	8.2	1	56998	2	1	U 100	FQ
NOV 3,84	NOV 2,84	700 800	830 1000	2	****	1	56999	2	1	****	
NOV 5,84	NOV 4,84	800 800	930 1230	1	30.6	2	41500	2	1	97	
NOV 10,84	NOV 9,84	730 730	1700 1900	1	8.8	2	41504	2	1	38	N
NOV 11,84	NOV 10,84	730 830	600 830	3	21.9	2	41505	2	1	U 26	FI
NOV 12,84	NOV 11,84	830 915	1100 1300	3	12.2	2	41506	2	1	****	FEI
NOV 16,84	NOV 15,84	700 700	1200 1500	1	13.2	2	41507	2	1	70	
NOV 17,84	NOV 16,84	700 700	1500 1600	2	2.2	2	41508	2	1	64	Q



ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 9,84	AUG 8,84	1.0	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	150.0	D 62.5	*****	3.88	0.1556	6.50	0.59
AUG 14,84	AUG 13,84	80.0	*****	*****	4.01	0.1134	5.00	0.52
AUG 15,84	AUG 14,84	1227.0	20.5	4.29	4.33	0.0606	1.80	0.22
AUG 19,84	AUG 18,84	221.0	28.0	4.18	4.24	0.0802	2.05	0.48
AUG 23,84	AUG 22,84	33.0	*****	*****	3.76	0.2220	*****	*****
AUG 24,84	AUG 23,84	47.0	*****	*****	4.57	0.0454	1.85	0.07
AUG 29,84	AUG 28,84	*****	*****	*****	*****	*****	*****	*****
AUG 31,84	AUG 30,84	407.0	20.6	4.36	4.52	0.0560	2.05	0.37
SEP 3,84	SEP 2,84	1119.0	19.0	4.33	4.45	0.0570	1.90	0.12
SEP 10,84	SEP 9,84	1420.0	21.5	4.32	4.50	0.0540	2.70	0.35
SEP 11,84	SEP 10,84	1919.0	11.5	4.57	4.72	0.0396	1.20	0.10
SEP 12,84	SEP 11,84	28.0	*****	*****	5.15	0.0312	1.90	0.52
SEP 13,84	SEP 12,84	868.0	20.0	4.33	4.46	0.0568	1.65	0.30
SEP 14,84	SEP 13,84	328.0	20.8	4.33	4.45	0.0700	2.05	0.26
SEP 17,84	SEP 16,84	693.0	8.8	4.68	4.87	0.0320	0.90	0.02
SEP 23,84	SEP 22,84	61.0	*****	*****	3.78	0.2020	9.15	1.00
SEP 26,84	SEP 25,84	824.0	28.3	4.16	4.31	0.0730	2.75	0.39
SEP 29,84	SEP 28,84	472.0	31.5	4.01	4.19	0.0862	1.70	0.71
OCT 3,84	OCT 2,84	99.0	*****	*****	G 7.14	0.0240	3.95	0.95
OCT 4,84	OCT 3,84	218.0	18.4	4.60	G 5.37	0.0294	3.20	0.42
OCT 5,84	OCT 4,84	93.0	12.0	*****	5.23	0.0334	1.45	0.11
OCT 8,84	OCT 7,84	462.0	79.0	3.70	3.73	0.2180	7.25	0.90
OCT 9,84	OCT 8,84	97.0	29.0	*****	4.20	0.0834	2.80	0.39
OCT 18,84	OCT 17,84	534.0	49.5	3.88	3.96	0.1286	4.05	0.52
OCT 20,84	OCT 19,84	474.0	51.5	3.85	3.96	0.1362	3.95	0.67
OCT 21,84	OCT 20,84	113.0	58.0	*****	3.89	0.1506	4.75	0.58
OCT 22,84	OCT 21,84	362.0	41.6	3.96	4.07	0.1164	3.50	0.39
OCT 26,84	OCT 25,84	298.0	13.0	4.49	4.64	0.0388	0.95	D 0.31
OCT 27,84	OCT 26,84	41.0	*****	*****	D 4.71	0.0640	*****	*****
OCT 28,84	OCT 27,84	392.0	40.1	4.01	4.01	0.1048	3.50	0.63
OCT 31,84	OCT 30,84	16.0	*****	*****	*****	*****	*****	*****
NOV 2,84	NOV 1,84	527.0	29.5	4.17	4.22	0.0738	2.95	0.54
NOV 3,84	NOV 2,84	25.0	*****	*****	G 5.61	0.0234	*****	*****
NOV 5,84	NOV 4,84	1914.0	21.9	4.18	4.30	0.0618	1.85	0.34
NOV 10,84	NOV 9,84	217.0	D 84.2	3.79	3.75	D 0.2040	D 5.40	D 1.72
NOV 11,84	NOV 10,84	367.0	D 60.0	4.00	3.99	0.1326	D 4.30	D 1.60
NOV 12,84	NOV 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	595.0	31.7	4.23	4.23	0.0830	2.65	0.52
NOV 17,84	NOV 16,84	91.0	11.3	*****	5.04	0.0286	1.45	0.13

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 9,84	AUG 8,84	*****	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	0.16	0.36	0.025	B 0.265	0.140	0.540	0.1318
AUG 14,84	AUG 13,84	0.17	0.24	0.020	0.125	0.100	0.490	0.0977
AUG 15,84	AUG 14,84	0.05	0.06	<W 0.005	0.015	0.015	0.120	0.0468
AUG 19,84	AUG 18,84	0.12	0.12	0.005	D 0.040	0.050	0.270	0.0575
AUG 23,84	AUG 22,84	*****	*****	*****	*****	*****	*****	0.1738
AUG 24,84	AUG 23,84	*****	0.14	*****	*****	*****	0.045	0.0269
AUG 29,84	AUG 28,84	*****	*****	*****	*****	*****	*****	*****
AUG 31,84	AUG 30,84	0.15	0.10	0.025	0.070	0.090	0.225	0.0302
SEP 3,84	SEP 2,84	0.03	0.06	<W 0.005	0.015	D 0.100	0.080	0.0355
SEP 10,84	SEP 9,84	<T 0.02	0.19	0.045	0.075	0.285	0.220	0.0316
SEP 11,84	SEP 10,84	<W 0.01	0.02	<W 0.005	<T 0.005	<T 0.005	0.120	0.0191
SEP 12,84	SEP 11,84	*****	0.38	*****	*****	*****	*****	0.0071
SEP 13,84	SEP 12,84	0.06	0.08	0.005	<T 0.010	0.025	0.080	0.0347
SEP 14,84	SEP 13,84	0.04	0.06	0.005	0.025	0.050	0.155	0.0355
SEP 17,84	SEP 16,84	<T 0.02	0.04	0.005	0.025	<T 0.005	0.035	0.0135
SEP 23,84	SEP 22,84	*****	0.44	*****	*****	*****	0.910	0.1660
SEP 26,84	SEP 25,84	0.08	0.12	0.015	0.045	0.030	0.380	0.0490
SEP 29,84	SEP 28,84	0.11	0.13	0.015	0.020	0.020	0.200	0.0646
OCT 3,84	OCT 2,84	G 1.67	0.24	G 0.360	G 0.185	0.085	1.000	G 0.0001
OCT 4,84	OCT 3,84	0.75	0.13	0.185	0.100	0.055	0.545	G 0.0043
OCT 5,84	OCT 4,84	0.12	0.07	0.225	0.070	0.045	0.255	0.0059
OCT 8,84	OCT 7,84	0.11	0.28	0.025	0.060	0.035	0.605	0.1862
OCT 9,84	OCT 8,84	0.05	0.09	0.035	0.085	0.060	0.220	0.0631
OCT 18,84	OCT 17,84	0.10	0.09	0.010	0.080	0.025	0.185	0.1096
OCT 20,84	OCT 19,84	0.13	0.33	0.020	B 0.200	0.115	0.255	0.1096
OCT 21,84	OCT 20,84	0.15	0.27	0.030	0.080	0.145	0.205	0.1288
OCT 22,84	OCT 21,84	0.06	0.18	0.010	0.040	0.075	0.220	0.0851
OCT 26,84	OCT 25,84	0.14	0.08	0.015	0.020	0.025	0.120	0.0229
OCT 27,84	OCT 26,84	*****	*****	*****	*****	*****	*****	D 0.0195
OCT 28,84	OCT 27,84	0.03	0.26	0.015	0.020	0.110	0.340	0.0977
OCT 31,84	OCT 30,84	*****	*****	*****	*****	*****	*****	*****
NOV 2,84	NOV 1,84	0.25	0.12	0.030	0.070	0.030	0.425	0.0603
NOV 3,84	NOV 2,84	*****	*****	*****	*****	*****	*****	G 0.0025
NOV 5,84	NOV 4,84	<W 0.01	0.08	<W 0.005	<T 0.005	0.025	0.210	0.0501
NOV 10,84	NOV 9,84	0.34	0.56	0.050	D 0.100	0.185	0.590	0.1778
NOV 11,84	NOV 10,84	D 0.40	0.38	D 0.045	0.090	0.210	D 1.050	0.1023
NOV 12,84	NOV 11,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	0.13	0.21	0.015	0.025	0.060	0.385	0.0589
NOV 17,84	NOV 16,84	0.28	D 0.40	0.030	0.100	B 0.310	0.105	0.0091



ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM

#07

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
NOV 23,84	NOV 22,84	700 700	300 400	2	3.2	2	41511	2	1	87	
NOV 29,84	NOV 28,84	700 700	1230 1430	1	4.6	2	41512	2	1	117	Q
DEC 1,84	NOV 30,84	700 700	600 730	1	1.4	2	41513	2	1	125	N
DEC 2,84	DEC 1,84	700 700	1800 1900	2	0.4	2	41514	2	1	****	EK
DEC 4,84	DEC 3,84	700 700	1630 1730	2	15.0	2	41515	2	1	47	N
DEC 5,84	DEC 4,84	700 700	1600 1730	2	3.8	2	41516	2	1	46	NH
DEC 6,84	DEC 5,84	700 700	1600 1730	2	4.8	2	41517	2	1	90	
DEC 13,84	DEC 12,84	700 700	830 1030	1	16.2	2	41520	2	1	101	
DEC 15,84	DEC 14,84	700 800	900 1100	3	****	2	41523	2	1	****	
DEC 17,84	DEC 16,84	800 700	1300 1500	1	0.6	2	41525	2	1	148	N
DEC 20,84	DEC 19,84	700 700	530 630	2	4.4	2	41528	2	1	61	C
DEC 22,84	DEC 21,84	700 700	1900 2000	2	15.0	2	41529	2	1	69	C
DEC 23,84	DEC 22,84	700 900	1700 1800	2	5.2	2	41530	2	1	69	
DEC 24,84	DEC 23,84	900 700	1500 1700	2	9.1	2	41531	2	1	60	
DEC 25,84	DEC 24,84	700 830	1300 1600	2	5.6	2	41532	2	1	59	
DEC 26,84	DEC 25,84	830 830	1300 1500	2	6.2	2	41533	2	1	40	N
DEC 28,84	DEC 27,84	800 900	1300 1500	1	10.6	2	41534	2	1	86	
DEC 29,84	DEC 28,84	900 900	1000 1400	1	51.0	2	41535	2	1	U 72	G

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
NOV 23,84	NOV 22,84	180.0	48.2	4.18	4.25	0.0894	3.60	1.83
NOV 29,84	NOV 28,84	347.0	19.0	4.47	4.57	0.0532	D 2.20	0.31
DEC 1,84	NOV 30,84	113.0	B 86.7	*****	3.84	D 0.1976	D 4.30	B 2.93
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	*****
DEC 4,84	DEC 3,84	454.0	16.2	4.33	4.59	0.0458	1.00	0.39
DEC 5,84	DEC 4,84	114.0	3.0	*****	G 5.70	0.0162	0.25	0.07
DEC 6,84	DEC 5,84	278.0	8.0	4.66	D 5.02	0.0284	D 0.20	0.38
DEC 13,84	DEC 12,84	1051.0	27.9	4.07	4.27	0.0846	1.90	0.35
DEC 15,84	DEC 14,84	190.0	25.7	4.27	4.27	0.0698	1.75	0.45
DEC 17,84	DEC 16,84	57.0	G 93.0	*****	3.79	0.2060	7.95	1.21
DEC 20,84	DEC 19,84	174.0	18.5	4.54	4.60	0.0488	1.00	0.67
DEC 22,84	DEC 21,84	668.0	11.4	D 4.59	4.68	0.0412	0.55	0.25
DEC 23,84	DEC 22,84	231.0	13.2	4.52	4.69	0.0410	1.05	0.23
DEC 24,84	DEC 23,84	353.0	17.7	4.47	4.56	0.0502	0.55	0.64
DEC 25,84	DEC 24,84	214.0	8.3	G 4.86	5.03	0.0306	0.30	0.34
DEC 26,84	DEC 25,84	160.0	15.1	4.57	4.62	0.0444	0.60	0.49
DEC 28,84	DEC 27,84	586.0	29.5	4.17	4.25	0.0844	2.75	0.30
DEC 29,84	DEC 28,84	2386.0	12.8	D 4.69	4.74	0.0392	1.15	0.21

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : NITHGROVE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
NOV 23,84	NOV 22,84	0.56	0.40	G 0.120	0.160	0.235	1.550	0.0562
NOV 29,84	NOV 28,84	0.27	0.14	0.050	D 0.080	0.105	0.255	0.0269
DEC 1,84	NOV 30,84	G 1.11	0.72	G 0.115	0.195	0.180	1.150	0.1445
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	*****
DEC 4,84	DEC 3,84	0.17	0.10	0.005	<T 0.010	<T 0.005	0.205	0.0257
DEC 5,84	DEC 4,84	0.18	0.09	0.005	0.020	0.040	0.080	G 0.0020
DEC 6,84	DEC 5,84	0.18	0.07	0.005	<W 0.005	<T 0.010	D 0.205	D 0.0095
DEC 13,84	DEC 12,84	0.08	0.11	<W 0.005	<W 0.005	<W 0.005	0.230	0.0537
DEC 15,84	DEC 14,84	0.04	0.10	0.005	<W 0.005	0.015	0.180	0.0537
DEC 17,84	DEC 16,84	*****	G 2.12	*****	*****	*****	0.480	0.1622
DEC 20,84	DEC 19,84	0.32	0.17	0.040	0.055	0.055	0.350	0.0251
DEC 22,84	DEC 21,84	0.08	<T 0.02	0.015	0.020	0.015	0.075	0.0209
DEC 23,84	DEC 22,84	0.19	0.14	0.020	0.020	0.080	0.090	0.0204
DEC 24,84	DEC 23,84	0.14	0.15	0.015	0.015	0.020	0.320	0.0275
DEC 25,84	DEC 24,84	0.07	0.03	<W 0.005	0.015	0.020	0.240	0.0093
DEC 26,84	DEC 25,84	0.23	0.22	0.035	0.035	0.115	0.105	0.0240
DEC 28,84	DEC 27,84	0.16	0.16	0.020	0.025	0.080	0.235	0.0562
DEC 29,84	DEC 28,84	0.08	0.09	0.015	0.040	0.060	0.215	0.0182

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

#05

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	900 900	**** ****	2	6.0	2	28982	2	1	65	HCM
JAN 3,84	JAN 2,84	900 900	**** ****	2	1.0	2	28983	2	1	17	N
JAN 4,84	JAN 3,84	900 830	2200 2400	2	2.4	2	28984	2	1	72	
JAN 6,84	JAN 5,84	830 830	2000 2400	2	8.4	2	28985	2	1	65	J
JAN 8,84	JAN 7,84	830 830	600 830	2	4.0	2	28986	2	1	43	NC
JAN 9,84	JAN 8,84	830 830	830 1100	2	1.4	2	28987	2	1	41	N
JAN 10,84	JAN 9,84	830 830	2100 2300	2	0.8	2	28988	2	1	58	
JAN 14,84	JAN 13,84	830 830	1930 2200	2	4.4	2	28989	2	1	68	HM
JAN 17,84	JAN 16,84	830 830	500 600	2	0.6	2	28990	2	1	15	E N
JAN 23,84	JAN 22,84	830 830	2030 2130	2	1.0	2	28991	2	1	60	
JAN 24,84	JAN 23,84	830 830	100 830	2	12.8	2	28992	2	1	66	
JAN 27,84	JAN 26,84	830 830	200 800	2	11.8	2	28993	2	1	59	
JAN 30,84	JAN 29,84	830 830	1200 1430	2	10.6	2	28994	2	1	8	N
JAN 31,84	JAN 30,84	830 830	900 1100	2	1.6	2	28995	2	1	21	U G
FEB 3,84	FEB 2,84	830 830	600 830	1	2.2	2	28996	2	1	118	
FEB 4,84	FEB 3,84	830 830	830 930	3	1.4	2	28997	2	1	67	
FEB 5,84	FEB 4,84	830 830	1700 2000	2	3.6	2	28998	2	1	71	
FEB 6,84	FEB 5,84	830 830	600 800	2	1.4	2	28999	2	1	10	E N
FEB 14,84	FEB 13,84	830 830	1445 1900	1	18.0	2	29900	2	1	98	
FEB 15,84	FEB 14,84	830 830	830 1030	1	1.0	2	29901	2	1	123	N
FEB 20,84	FEB 19,84	830 830	1830 1900	3	2.2	2	29903	2	1	104	
FEB 21,84	FEB 20,84	830 830	630 830	2	1.6	2	29905	2	1	90	
FEB 22,84	FEB 21,84	830 830	800 830	2	0.2	2	29906	2	1	124	N
MAR 1,84	FEB 26,84	830 1100	**** ****	2	****	2	29907	2	1	****	Z
MAR 5,84	MAR 4,84	830 830	600 830	2	2.8	2	29908	2	1	49	N
MAR 6,84	MAR 5,84	830 830	830 1100	2	9.6	2	29909	2	1	56	
MAR 10,84	MAR 9,84	830 830	800 830	2	0.4	2	29910	2	1	35	E N
MAR 14,84	MAR 13,84	830 830	1400 1500	2	3.2	2	29911	2	1	3	E
MAR 16,84	MAR 15,84	830 830	200 830	1	10.6	2	29912	2	1	104	
MAR 17,84	MAR 16,84	830 830	830 1415	3	24.0	2	29913	2	1	92	
MAR 22,84	MAR 21,84	830 830	1000 1500	3	12.0	2	29917	2	1	100	
MAR 23,84	MAR 22,84	830 830	830 1000	2	2.8	2	29918	2	1	78	
APR 5,84	APR 4,84	830 830	200 830	1	11.2	2	29920	2	1	108	JC
APR 6,84	APR 5,84	830 830	830 900	1	0.3	1	29921	2	1	88	
APR 7,84	APR 6,84	830 830	1500 1530	3	0.2	1	29922	2	1	23	E N
APR 15,84	APR 13,84	830 1600	**** ****	1	14.8	1	29923	2	1	93	Z
APR 16,84	APR 15,84	1600 830	1500 1600	1	0.3	1	29924	2	1	41	E N
APR 17,84	APR 16,84	830 830	1130 1800	3	16.0	1	29925	2	1	98	HCM
APR 23,84	APR 22,84	830 830	730 830	1	0.9	1	29928	2	1	114	
APR 24,84	APR 23,84	830 830	830 1000	1	4.9	1	29929	2	1	108	J

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	252.0	29.2	3.98	4.11	0.0950	0.50	1.85
JAN 3,84	JAN 2,84	11.0	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	111.0	21.5	*****	4.37	0.0590	0.75	0.75
JAN 6,84	JAN 5,84	354.0	25.5	3.85	4.31	0.0676	1.45	0.60
JAN 8,84	JAN 7,84	112.0	11.5	*****	4.53	0.0472	0.35	0.34
JAN 9,84	JAN 8,84	37.0	*****	*****	4.16	0.0966	*****	*****
JAN 10,84	JAN 9,84	30.0	*****	*****	G 5.61	0.0182	0.65	<W 0.01
JAN 14,84	JAN 13,84	194.0	34.0	3.90	4.13	0.0878	0.50	0.03
JAN 17,84	JAN 16,84	6.0	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	39.0	*****	*****	5.02	0.0340	0.85	1.00
JAN 24,84	JAN 23,84	546.0	15.2	4.33	4.55	0.0500	0.65	0.39
JAN 27,84	JAN 26,84	450.0	23.7	4.20	4.40	0.0862	1.15	0.85
JAN 30,84	JAN 29,84	57.0	*****	*****	4.07	0.1104	2.00	0.97
JAN 31,84	JAN 30,84	22.0	*****	*****	4.48	D 0.0684	*****	*****
FEB 3,84	FEB 2,84	167.0	60.3	3.71	3.93	0.1534	2.80	1.57
FEB 4,84	FEB 3,84	61.0	*****	*****	4.30	0.0860	1.80	0.74
FEB 5,84	FEB 4,84	164.0	*****	*****	4.14	0.1124	2.05	1.02
FEB 6,84	FEB 5,84	9.0	*****	*****	*****	*****	*****	*****
FEB 14,84	FEB 13,84	1134.0	19.0	4.11	4.47	0.0546	D 1.45	0.27
FEB 15,84	FEB 14,84	79.0	*****	*****	4.06	0.1116	2.85	0.92
FEB 20,84	FEB 19,84	148.0	29.2	*****	4.37	0.0736	1.10	0.96
FEB 21,84	FEB 20,84	93.0	*****	*****	4.34	0.0744	1.10	0.96
FEB 22,84	FEB 21,84	16.0	*****	*****	4.53	0.0562	*****	*****
MAR 1,84	FEB 26,84	96.0	*****	*****	G 6.18	0.0152	0.45	0.05
MAR 5,84	MAR 4,84	88.0	*****	*****	4.99	0.0310	0.60	0.40
MAR 6,84	MAR 5,84	349.0	19.8	4.22	4.41	0.0634	1.55	0.46
MAR 10,84	MAR 9,84	9.0	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	7.0	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	708.0	59.5	3.58	3.87	0.1610	4.60	1.00
MAR 17,84	MAR 16,84	1424.0	17.8	4.07	4.40	0.0600	1.35	0.17
MAR 22,84	MAR 21,84	773.0	19.4	4.06	4.38	0.0588	1.40	0.30
MAR 23,84	MAR 22,84	140.0	D 35.1	*****	4.09	D 0.1322	1.55	0.66
APR 5,84	APR 4,84	777.0	5.5	4.41	G 5.19	0.0256	0.45	0.07
APR 6,84	APR 5,84	17.0	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	3.0	*****	*****	*****	*****	*****	*****
APR 15,84	APR 13,84	888.0	36.5	4.15	4.21	0.0942	2.80	0.62
APR 16,84	APR 15,84	8.0	*****	*****	*****	*****	*****	*****
APR 17,84	APR 16,84	1012.0	5.6	G 4.96	G 5.40	0.0262	0.45	0.06
APR 23,84	APR 22,84	66.0	*****	*****	4.71	0.0438	2.00	0.38
APR 24,84	APR 23,84	342.0	33.0	4.50	4.20	0.0974	1.55	0.55

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	0.17	0.33	0.025	<T 0.010	0.115	0.018	0.0776
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	*****	0.36	*****	*****	*****	0.026	0.0427
JAN 6,84	JAN 5,84	0.14	0.29	0.015	<T 0.010	0.070	0.268	0.0490
JAN 8,84	JAN 7,84	0.21	0.45	0.040	<W 0.005	0.235	<W 0.002	0.0295
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	0.0692
JAN 10,84	JAN 9,84	*****	G 0.97	*****	*****	*****	*****	G 0.0025
JAN 14,84	JAN 13,84	0.11	0.44	0.025	<W 0.005	0.115	<T 0.002	0.0741
JAN 17,84	JAN 16,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	*****	B 1.02	*****	*****	*****	*****	0.0095
JAN 24,84	JAN 23,84	0.11	0.10	0.015	0.025	0.050	0.064	0.0282
JAN 27,84	JAN 26,84	0.33	0.20	0.025	0.080	0.080	0.340	0.0398
JAN 30,84	JAN 29,84	*****	0.43	*****	*****	*****	0.160	0.0851
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	0.0331
FEB 3,84	FEB 2,84	0.41	0.53	0.065	0.185	0.270	0.300	0.1175
FEB 4,84	FEB 3,84	*****	0.45	*****	*****	*****	0.120	0.0501
FEB 5,84	FEB 4,84	*****	0.40	*****	*****	*****	0.360	0.0724
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 14,84	FEB 13,84	0.07	0.14	0.020	0.005	0.075	0.110	0.0339
FEB 15,84	FEB 14,84	*****	0.41	*****	*****	*****	0.190	0.0871
FEB 20,84	FEB 19,84	0.31	0.21	0.020	0.045	0.115	0.440	0.0427
FEB 21,84	FEB 20,84	*****	0.35	*****	*****	*****	0.266	0.0457
FEB 22,84	FEB 21,84	*****	*****	*****	*****	*****	*****	0.0295
MAR 1,84	FEB 26,84	0.33	0.26	0.065	0.020	0.155	<T 0.002	G 0.0007
MAR 5,84	MAR 4,84	0.53	0.25	0.055	<T 0.010	0.140	0.024	0.0102
MAR 6,84	MAR 5,84	0.13	0.11	0.010	<T 0.010	0.055	0.318	0.0389
MAR 10,84	MAR 9,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	0.27	0.32	0.040	0.035	0.120	0.410	0.1349
MAR 17,84	MAR 16,84	0.06	0.08	0.010	<T 0.005	0.015	0.050	0.0398
MAR 22,84	MAR 21,84	0.14	0.19	0.025	<T 0.010	0.080	D 0.134	0.0417
MAR 23,84	MAR 22,84	0.12	0.27	0.015	<W 0.005	0.025	0.112	0.0813
APR 5,84	APR 4,84	0.05	0.05	0.015	<W 0.005	0.020	0.034	G 0.0065
APR 6,84	APR 5,84	*****	*****	*****	*****	*****	*****	*****
APR 7,84	APR 6,84	*****	*****	*****	*****	*****	*****	*****
APR 15,84	APR 13,84	0.13	0.14	0.025	0.045	0.025	0.360	0.0617
APR 16,84	APR 15,84	*****	*****	*****	*****	*****	*****	*****
APR 17,84	APR 16,84	0.04	0.05	<W 0.005	<W 0.005	<T 0.005	0.030	G 0.0040
APR 23,84	APR 22,84	*****	0.28	*****	*****	*****	0.240	0.0195
APR 24,84	APR 23,84	0.17	0.13	0.020	0.020	0.030	0.215	0.0631

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
APR 25,84	APR 24,84	830 830	830 1000	1	2.2	1	29930	2	1	83	C
APR 29,84	APR 28,84	830 830	1130 1215	1	2.4	1	29931	2	1	111	C
APR 30,84	APR 29,84	830 830	700 815	1	0.7	1	29932	2	1	167	N
MAY 1,84	APR 30,84	830 830	915 945	1	2.3	1	29933	2	1	76	
MAY 4,84	MAY 3,84	830 830	200 830	1	8.7	1	29934	2	1	112	
MAY 5,84	MAY 4,84	830 830	830 1130	1	4.0	1	29935	2	1	90	C
MAY 8,84	MAY 7,84	830 830	630 830	1	2.8	1	29936	2	1	123	N
MAY 9,84	MAY 8,84	830 830	830 1530	1	24.0	1	29937	2	1	101	
MAY 10,84	MAY 9,84	830 830	1900 2000	1	0.5	1	29940	2	1	90	
MAY 12,84	MAY 11,84	830 830	1245 1630	1	14.3	1	29942	2	1	103	
MAY 22,84	MAY 21,84	830 830	715 745	1	2.8	1	29944	2	1	123	N
MAY 23,84	MAY 22,84	830 830	200 300	1	8.0	1	29945	2	1	98	
MAY 25,84	MAY 24,84	830 830	400 500	1	0.8	1	29946	2	1	142	N
MAY 26,84	MAY 25,84	830 830	200 400	1	10.7	1	29947	2	1	106	
MAY 29,84	MAY 28,84	830 830	1800 2100	1	6.5	1	29948	2	1	106	
MAY 30,84	MAY 29,84	830 830	1600 1900	1	2.4	1	29949	2	1	58	
MAY 31,84	MAY 30,84	830 830	1415 1700	1	2.5	1	29950	2	1	94	
JUN 6,84	JUN 5,84	830 830	200 230	1	0.4	1	29951	2	1	120	N
JUN 7,84	JUN 6,84	830 830	2000 2100	1	6.2	1	29952	2	1	101	JC
JUN 8,84	JUN 7,84	830 830	1815 1830	1	0.8	1	29953	2	1	173	C NH
JUN 10,84	JUN 9,84	830 830	1230 100	1	0.8	1	29954	2	1	167	C NH
JUN 13,84	JUN 12,84	830 830	500 530	1	0.7	1	29955	2	1	149	C N
JUN 18,84	JUN 17,84	830 830	200 300	1	31.0	1	29957	2	1	22	N
JUN 19,84	JUN 18,84	830 830	1415 1435	1	4.0	1	29960	2	1	97	
JUN 24,84	JUN 23,84	830 830	600 700	1	12.7	1	29961	2	1	106	
JUN 28,84	JUN 27,84	830 830	1130 1345	1	22.3	1	29962	2	1	104	
JUL 4,84	JUL 3,84	830 830	300 400	1	6.3	1	29963	2	1	105	
JUL 6,84	JUL 5,84	830 830	1900 1945	1	0.9	1	29964	2	1	142	N
JUL 7,84	JUL 6,84	830 830	1030 1430	1	16.3	1	29965	2	1	122	N
JUL 8,84	JUL 7,84	830 830	1130 1200	1	0.7	1	29968	2	1	124	N
JUL 11,84	JUL 10,84	830 830	430 800	1	24.6	1	29969	2	1	106	
JUL 16,84	JUL 15,84	830 830	1700 1745	1	6.7	1	29970	2	1	106	
JUL 18,84	JUL 17,84	830 830	1500 1515	1	0.4	1	29971	2	1	93	
JUL 19,84	JUL 18,84	830 830	1830 1900	1	0.5	1	29972	2	1	115	
JUL 21,84	JUL 20,84	830 830	1630 1730	1	22.5	1	29973	2	1	103	
JUL 27,84	JUL 26,84	830 830	500 530	1	0.3	1	29975	2	1	135	N
AUG 1,84	JUL 31,84	830 830	745 830	1	0.8	1	29976	2	1	175	N
AUG 2,84	AUG 1,84	830 830	830 1015	1	12.6	1	29977	2	1	105	
AUG 7,84	AUG 6,84	830 830	1900 2000	1	2.5	1	29980	2	1	96	
AUG 8,84	AUG 7,84	830 830	1800 1815	1	0.5	1	29981	2	1	109	



ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 25,84	APR 24,84	118.0	15.2	*****	4.74	0.0426	1.00	0.24
APR 29,84	APR 28,84	171.0	50.5	4.18	4.33	0.0942	8.20	1.11
APR 30,84	APR 29,84	75.0	37.3	*****	4.29	0.0934	5.20	0.49
MAY 1,84	APR 30,84	113.0	24.2	*****	4.50	0.0634	2.90	0.21
MAY 4,84	MAY 3,84	628.0	12.0	4.62	4.72	0.0438	0.95	0.16
MAY 5,84	MAY 4,84	231.0	10.3	4.62	4.84	0.0358	0.55	0.09
MAY 8,84	MAY 7,84	222.0	63.0	3.94	4.00	0.1458	5.95	1.18
MAY 9,84	MAY 8,84	1563.0	17.4	4.47	4.56	0.0532	1.60	0.16
MAY 10,84	MAY 9,84	29.0	*****	*****	4.95	0.0402	*****	*****
MAY 12,84	MAY 11,84	947.0	59.4	3.97	4.11	0.1262	6.80	1.21
MAY 22,84	MAY 21,84	221.0	42.5	4.01	4.06	0.1104	4.15	0.44
MAY 23,84	MAY 22,84	505.0	14.1	4.54	4.61	0.0434	1.05	0.24
MAY 25,84	MAY 24,84	73.0	*****	*****	4.01	0.1288	5.80	1.04
MAY 26,84	MAY 25,84	729.0	27.9	4.22	4.31	0.0782	2.65	0.51
MAY 29,84	MAY 28,84	444.0	14.6	4.45	4.55	0.0508	1.45	0.11
MAY 30,84	MAY 29,84	90.0	*****	*****	4.26	0.0886	2.25	0.40
MAY 31,84	MAY 30,84	152.0	13.6	*****	4.69	D 0.0406	1.60	0.13
JUN 6,84	JUN 5,84	31.0	*****	*****	3.94	0.1964	> 10.00	> 2.00
JUN 7,84	JUN 6,84	402.0	14.4	4.60	5.18	0.0302	1.70	0.24
JUN 8,84	JUN 7,84	89.0	*****	*****	4.71	0.0506	5.00	1.11
JUN 10,84	JUN 9,84	86.0	*****	*****	4.84	0.0258	7.30	1.61
JUN 13,84	JUN 12,84	67.0	*****	*****	3.82	0.2240	G 13.50	1.97
JUN 18,84	JUN 17,84	438.0	28.5	*****	4.24	0.0788	3.25	0.41
JUN 19,84	JUN 18,84	250.0	14.3	4.62	4.86	0.0334	1.85	0.25
JUN 24,84	JUN 23,84	864.0	22.3	4.35	4.38	0.0554	2.10	0.18
JUN 28,84	JUN 27,84	1490.0	33.9	4.11	4.16	0.0868	3.75	0.46
JUL 4,84	JUL 3,84	425.0	99.0	3.67	3.65	0.2640	12.00	1.22
JUL 6,84	JUL 5,84	82.0	*****	*****	4.92	0.0326	2.05	0.46
JUL 7,84	JUL 6,84	1285.0	14.0	4.48	4.59	0.0452	1.60	0.25
JUL 8,84	JUL 7,84	56.0	*****	*****	G 5.68	0.0186	*****	*****
JUL 11,84	JUL 10,84	1676.0	40.6	4.02	4.06	0.1084	4.00	0.52
JUL 16,84	JUL 15,84	458.0	94.5	3.70	3.69	0.2360	11.00	1.04
JUL 18,84	JUL 17,84	24.0	*****	*****	4.48	0.0832	*****	*****
JUL 19,84	JUL 18,84	37.0	*****	*****	3.94	D 0.1392	5.90	0.15
JUL 21,84	JUL 20,84	1494.0	26.8	4.39	D 4.38	0.0592	3.45	0.54
JUL 27,84	JUL 26,84	26.0	*****	*****	4.54	D 0.0454	*****	*****
AUG 1,84	JUL 31,84	90.0	*****	*****	D 4.47	0.0500	2.40	0.39
AUG 2,84	AUG 1,84	849.0	20.0	4.30	4.38	0.0560	2.50	0.19
AUG 7,84	AUG 6,84	154.0	> 100.0	*****	3.54	G 0.3060	G 20.50	1.50
AUG 8,84	AUG 7,84	35.0	*****	*****	3.75	0.2040	*****	*****



ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 25,84	APR 24,84	0.19	0.19	0.035	0.015	0.095	0.090	0.0182
APR 29,84	APR 28,84	G 2.15	0.72	G 0.200	0.180	G 0.535	1.250	0.0468
APR 30,84	APR 29,84	G 0.95	0.39	G 0.140	0.135	0.225	0.410	0.0513
MAY 1,84	APR 30,84	0.26	0.23	0.050	0.050	0.135	0.360	0.0316
MAY 4,84	MAY 3,84	0.05	0.03	0.010	<W 0.005	0.025	0.075	0.0191
MAY 5,84	MAY 4,84	0.03	0.03	0.015	<W 0.005	0.030	0.005	0.0145
MAY 8,84	MAY 7,84	0.46	0.28	0.095	0.060	0.115	1.100	0.1000
MAY 9,84	MAY 8,84	0.03	0.03	0.005	<W 0.005	0.015	0.185	0.0275
MAY 10,84	MAY 9,84	*****	*****	*****	*****	*****	*****	0.0112
MAY 12,84	MAY 11,84	1.12	0.28	0.120	0.075	0.075	1.050	0.0776
MAY 22,84	MAY 21,84	0.18	0.23	0.025	0.085	0.125	0.235	0.0871
MAY 23,84	MAY 22,84	0.06	0.04	0.010	0.020	<T 0.005	0.155	0.0245
MAY 25,84	MAY 24,84	*****	0.19	*****	*****	*****	*****	0.0977
MAY 26,84	MAY 25,84	0.27	0.08	0.075	0.030	<T 0.005	0.280	0.0490
MAY 29,84	MAY 28,84	0.08	0.06	D 0.015	0.030	0.030	0.055	0.0282
MAY 30,84	MAY 29,84	0.12	0.09	0.010	0.035	0.030	*****	0.0550
MAY 31,84	MAY 30,84	0.14	0.04	0.010	<T 0.015	<T 0.005	0.190	0.0204
JUN 6,84	JUN 5,84	*****	G 1.39	*****	*****	*****	*****	0.1148
JUN 7,84	JUN 6,84	0.37	0.10	0.085	0.020	0.060	0.320	0.0066
JUN 8,84	JUN 7,84	B 1.72	0.30	D 0.235	0.120	0.180	1.150	0.0195
JUN 10,84	JUN 9,84	G 2.50	0.64	G 0.675	G 0.210	G 0.475	1.850	0.0145
JUN 13,84	JUN 12,84	*****	0.74	*****	*****	*****	D 1.400	0.1514
JUN 18,84	JUN 17,84	0.05	0.15	0.010	0.035	0.030	D 0.535	0.0575
JUN 19,84	JUN 18,84	0.09	0.08	0.015	0.030	0.025	0.525	0.0138
JUN 24,84	JUN 23,84	0.03	0.16	0.005	<T 0.015	<T 0.010	0.165	0.0417
JUN 28,84	JUN 27,84	0.21	0.15	0.025	0.035	<T 0.005	0.485	0.0692
JUL 4,84	JUL 3,84	0.66	0.29	0.110	0.090	0.040	0.850	0.2239
JUL 6,84	JUL 5,84	0.67	0.45	0.100	0.050	0.260	*****	0.0120
JUL 7,84	JUL 6,84	0.11	0.08	0.015	<T 0.015	<T 0.005	0.290	0.0257
JUL 8,84	JUL 7,84	*****	*****	*****	*****	*****	*****	G 0.0021
JUL 11,84	JUL 10,84	0.13	0.14	0.010	<T 0.005	<T 0.015	0.355	0.0871
JUL 16,84	JUL 15,84	0.78	0.23	0.120	0.045	0.020	0.620	0.2042
JUL 18,84	JUL 17,84	*****	*****	*****	*****	*****	*****	0.0331
JUL 19,84	JUL 18,84	*****	0.17	*****	*****	*****	*****	0.1148
JUL 21,84	JUL 20,84	0.58	0.10	0.125	0.035	0.045	0.470	D 0.0417
JUL 27,84	JUL 26,84	*****	*****	*****	*****	*****	*****	0.0288
AUG 1,84	JUL 31,84	0.45	0.16	0.080	0.105	0.075	0.250	D 0.0339
AUG 2,84	AUG 1,84	0.10	0.04	0.015	<T 0.010	<T 0.005	0.375	0.0417
AUG 7,84	AUG 6,84	G 1.45	0.34	G 0.355	0.150	0.055	1.750	0.2884
AUG 8,84	AUG 7,84	*****	*****	*****	*****	*****	*****	0.1778

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 10,84	AUG 9,84	830 830	520 530	1	0.2	1	29982	2	1	31	E N
AUG 13,84	AUG 12,84	830 830	1630 1815	1	6.3	1	29983	2	1	106	
AUG 14,84	AUG 13,84	830 830	830 1000	1	2.4	1	29984	2	1	100	
AUG 16,84	AUG 15,84	830 830	2430 130	1	12.6	1	29986	2	1	100	
AUG 19,84	AUG 18,84	830 830	1715 2000	1	24.2	1	29987	2	1	102	
AUG 23,84	AUG 22,84	830 830	1615 1845	1	4.4	1	29988	2	1	100	
AUG 24,84	AUG 23,84	830 830	845 900	1	0.5	1	29989	2	1	68	Q
AUG 29,84	AUG 28,84	830 830	430 530	1	4.4	1	29990	2	1	106	
AUG 30,84	AUG 29,84	830 830	1430 1715	1	38.8	1	29991	2	1	169	N
AUG 31,84	AUG 30,84	830 830	830 1000	1	2.8	1	29992	2	1	110	
SEP 2,84	SEP 1,84	830 830	630 830	1	2.3	1	29993	2	1	93	
SEP 3,84	SEP 2,84	830 830	830 1400	1	14.5	1	29994	2	1	105	
SEP 10,84	SEP 9,84	830 830	2130 1100	1	8.0	1	29997	2	1	105	
SEP 11,84	SEP 10,84	830 830	1600 1630	1	2.2	1	29998	2	1	92	
SEP 12,84	SEP 11,84	830 830	845 1100	1	2.5	1	29999	2	1	102	
SEP 13,84	SEP 12,84	830 830	600 830	1	20.5	1	30000	2	1	106	
SEP 14,84	SEP 13,84	830 830	830 930	1	2.0	1	41001	2	1	85	
SEP 15,84	SEP 14,84	830 830	330 500	1	2.6	1	41002	2	1	108	M
SEP 16,84	SEP 15,84	830 830	500 700	1	4.0	1	41003	2	1	99	M
SEP 17,84	SEP 16,84	830 830	1530 1545	1	2.3	1	41004	2	1	85	
SEP 23,84	SEP 22,84	830 830	700 730	1	0.3	1	41005	2	1	129	N
SEP 24,84	SEP 23,84	830 830	1000 1100	1	0.1	1	41006	2	1	****	E
SEP 26,84	SEP 25,84	830 830	1230 1400	1	5.3	1	41007	2	1	103	
SEP 29,84	SEP 28,84	830 830	1800 2200	1	2.1	1	41008	2	1	94	A H
OCT 3,84	OCT 2,84	900 900	230 600	1	3.0	1	41009	2	1	90	JHM
OCT 4,84	OCT 3,84	900 900	1550 1700	1	0.8	1	41010	2	1	95	C
OCT 5,84	OCT 4,84	830 830	2030 2200	1	0.5	1	41011	2	1	49	N
OCT 8,84	OCT 7,84	830 830	1600 1800	1	7.0	1	41012	2	1	99	
OCT 9,84	OCT 8,84	830 830	800 2300	1	2.0	1	41013	2	1	85	
OCT 18,84	OCT 17,84	830 845	1500 200	1	40.0	1	41015	2	1	68	
OCT 20,84	OCT 19,84	830 830	1200 1700	1	5.6	1	41018	2	1	97	
OCT 21,84	OCT 20,84	830 830	200 830	1	1.6	1	41019	2	1	74	
OCT 22,84	OCT 21,84	830 830	300 800	1	1.6	1	41020	2	1	89	
OCT 26,84	OCT 25,84	830 830	1630 1800	1	5.0	1	41021	2	1	92	
OCT 27,84	OCT 26,84	830 840	900 2000	1	2.6	1	41022	2	1	88	
OCT 28,84	OCT 27,84	840 820	1000 1400	1	3.4	1	41023	2	1	102	
NOV 2,84	NOV 1,84	830 830	1515 2000	1	4.3	2	41024	2	1	140	N
NOV 3,84	NOV 2,84	830 840	800 1200	2	0.6	2	41025	2	1	****	EK
NOV 5,84	NOV 4,84	830 830	830 2200	1	36.3	2	41026	2	1	97	
NOV 6,84	NOV 5,84	830 812	1830 2200	1	1.0	2	41029	2	1	148	N

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 10,84	AUG 9,84	4.0	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	432.0	17.5	4.38	4.52	0.0522	1.90	0.22
AUG 14,84	AUG 13,84	155.0	18.5	*****	4.43	0.0558	1.60	0.33
AUG 16,84	AUG 15,84	813.0	23.6	4.30	4.49	0.0556	3.50	0.37
AUG 19,84	AUG 18,84	1595.0	22.5	4.26	4.32	0.0650	2.20	0.34
AUG 23,84	AUG 22,84	283.0	> 100.0	3.49	3.51	G 0.3460	12.70	1.31
AUG 24,84	AUG 23,84	22.0	*****	*****	4.31	0.0728	*****	*****
AUG 29,84	AUG 28,84	301.0	49.5	3.95	4.03	0.1246	4.50	0.55
AUG 30,84	AUG 29,84	4213.0	33.8	4.12	4.22	0.0844	3.60	0.41
AUG 31,84	AUG 30,84	198.0	43.6	3.97	4.08	0.1124	3.20	0.78
SEP 2,84	SEP 1,84	138.0	26.5	*****	4.39	0.0686	2.70	0.36
SEP 3,84	SEP 2,84	979.0	29.1	4.15	4.27	0.0786	2.75	0.29
SEP 10,84	SEP 9,84	542.0	38.7	4.10	4.22	0.0880	3.60	0.68
SEP 11,84	SEP 10,84	130.0	34.5	*****	4.24	0.0870	2.85	0.55
SEP 12,84	SEP 11,84	164.0	7.0	*****	5.12	0.0258	0.50	0.20
SEP 13,84	SEP 12,84	1402.0	27.3	4.16	4.30	0.0730	2.30	0.34
SEP 14,84	SEP 13,84	110.0	31.4	*****	4.28	0.0814	3.20	0.47
SEP 15,84	SEP 14,84	180.0	10.9	4.53	4.72	0.0380	0.95	0.10
SEP 16,84	SEP 15,84	254.0	5.4	4.88	5.08	0.0254	0.60	0.02
SEP 17,84	SEP 16,84	126.0	9.1	*****	4.85	0.0330	1.10	0.05
SEP 23,84	SEP 22,84	25.0	*****	*****	3.43	G 0.4420	*****	*****
SEP 24,84	SEP 23,84	*****	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	351.0	38.7	4.06	4.14	0.0954	3.70	0.55
SEP 29,84	SEP 28,84	127.0	51.3	*****	4.67	0.0584	5.20	2.27
OCT 3,84	OCT 2,84	174.0	28.3	4.70	G 7.25	0.0230	4.75	1.13
OCT 4,84	OCT 3,84	49.0	*****	*****	G 6.19	0.0208	1.05	0.06
OCT 5,84	OCT 4,84	16.0	*****	*****	G 7.25	0.0210	*****	*****
OCT 8,84	OCT 7,84	446.0	> 100.0	3.50	3.51	G 0.3740	12.10	1.63
OCT 9,84	OCT 8,84	109.0	> 100.0	*****	3.62	0.2820	9.50	1.33
OCT 18,84	OCT 17,84	1751.0	50.3	3.88	3.95	0.1256	4.05	0.64
OCT 20,84	OCT 19,84	351.0	48.3	3.92	3.97	0.1260	3.95	0.63
OCT 21,84	OCT 20,84	76.0	*****	*****	3.54	B 0.3100	D 12.90	1.25
OCT 22,84	OCT 21,84	92.0	*****	*****	3.72	0.2100	8.10	1.07
OCT 26,84	OCT 25,84	297.0	13.1	4.50	4.88	0.0302	1.20	0.28
OCT 27,84	OCT 26,84	147.0	66.8	*****	3.89	0.1642	4.20	1.36
OCT 28,84	OCT 27,84	224.0	61.6	3.77	3.91	0.1528	4.85	0.92
NOV 2,84	NOV 1,84	387.0	D 38.0	4.00	4.05	0.0942	3.20	0.76
NOV 3,84	NOV 2,84	*****	*****	*****	*****	*****	*****	*****
NOV 5,84	NOV 4,84	2271.0	29.6	4.09	4.11	0.0798	2.60	0.36
NOV 6,84	NOV 5,84	95.0	12.5	*****	4.69	0.0354	1.30	0.15

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM #05

PAGE : 9

REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 10,84	AUG 9,84	*****	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	0.04	0.09	0.005	<W 0.005	<T 0.010	0.295	0.0302
AUG 14,84	AUG 13,84	0.10	0.18	0.010	0.075	0.095	0.165	0.0372
AUG 16,84	AUG 15,84	0.59	0.12	0.055	0.035	0.020	0.500	0.0324
AUG 19,84	AUG 18,84	0.09	0.10	<W 0.005	<T 0.005	0.095	0.160	0.0479
AUG 23,84	AUG 22,84	0.32	0.31	0.070	<T 0.010	0.020	0.595	0.3090
AUG 24,84	AUG 23,84	*****	*****	*****	*****	*****	*****	0.0490
AUG 29,84	AUG 28,84	0.14	0.14	0.015	0.060	0.020	0.280	0.0933
AUG 30,84	AUG 29,84	0.14	0.08	0.020	0.015	<T 0.005	0.480	0.0603
AUG 31,84	AUG 30,84	0.18	0.11	0.015	0.020	0.020	0.325	0.0832
SEP 2,84	SEP 1,84	0.28	0.10	0.045	0.050	0.065	0.185	0.0407
SEP 3,84	SEP 2,84	0.08	0.07	<W 0.005	<W 0.005	<W 0.005	0.190	0.0537
SEP 10,84	SEP 9,84	0.42	0.28	0.135	0.050	0.220	0.300	0.0603
SEP 11,84	SEP 10,84	0.33	0.23	0.065	<T 0.010	0.095	0.170	0.0575
SEP 12,84	SEP 11,84	0.09	0.10	0.010	<T 0.010	0.035	0.125	0.0076
SEP 13,84	SEP 12,84	D 0.10	0.09	D 0.010	<T 0.010	0.020	0.165	0.0501
SEP 14,84	SEP 13,84	0.44	0.20	0.060	0.065	0.160	0.210	0.0525
SEP 15,84	SEP 14,84	<T 0.01	0.10	<W 0.005	0.025	0.020	0.040	0.0191
SEP 16,84	SEP 15,84	0.04	0.08	0.010	<T 0.010	0.020	0.010	0.0083
SEP 17,84	SEP 16,84	0.08	0.10	0.005	0.020	0.015	0.070	0.0141
SEP 23,84	SEP 22,84	*****	*****	*****	*****	*****	*****	0.3715
SEP 24,84	SEP 23,84	*****	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	0.14	0.16	0.015	0.040	0.055	0.525	0.0724
SEP 29,84	SEP 28,84	B 2.86	G 1.53	G 0.335	G 0.705	B 0.810	1.250	0.0214
OCT 3,84	OCT 2,84	G 2.04	0.48	G 0.380	G 0.310	D 0.290	0.845	G 0.0001
OCT 4,84	OCT 3,84	*****	0.36	*****	*****	*****	0.055	G 0.0006
OCT 5,84	OCT 4,84	*****	*****	*****	*****	*****	*****	G 0.0001
OCT 8,84	OCT 7,84	0.24	0.42	0.040	0.135	0.080	1.200	0.3090
OCT 9,84	OCT 8,84	0.17	0.40	0.035	0.115	0.165	0.785	0.2399
OCT 18,84	OCT 17,84	0.08	0.07	<W 0.005	0.030	<T 0.010	0.295	0.1122
OCT 20,84	OCT 19,84	0.13	0.30	0.030	0.055	0.145	0.300	0.1072
OCT 21,84	OCT 20,84	*****	0.72	*****	*****	*****	0.795	0.2884
OCT 22,84	OCT 21,84	0.58	0.55	0.065	0.105	0.325	0.675	0.1905
OCT 26,84	OCT 25,84	0.40	0.07	0.015	0.020	0.020	0.120	0.0132
OCT 27,84	OCT 26,84	0.08	0.11	<W 0.005	0.030	<T 0.015	0.495	0.1288
OCT 28,84	OCT 27,84	0.13	0.48	0.050	0.125	G 0.385	0.380	0.1230
NOV 2,84	NOV 1,84	0.52	0.21	G 0.100	0.040	0.050	0.210	0.0891
NOV 3,84	NOV 2,84	*****	*****	*****	*****	*****	*****	*****
NOV 5,84	NOV 4,84	<T 0.01	0.10	0.005	<T 0.005	0.035	0.210	0.0776
NOV 6,84	NOV 5,84	0.05	0.24	0.005	0.110	0.195	0.125	0.0204

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

#05

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
NOV 10,84	NOV 9,84	850 900	1500 2400	1	14.3	2	41031	2	1	91	
NOV 11,84	NOV 10,84	900 900	800 200	1	17.5	2	41032	2	1	104	C
NOV 12,84	NOV 11,84	900 850	400 900	3	4.6	2	41033	2	1	84	
NOV 13,84	NOV 12,84	850 855	1100 1600	2	0.6	2	41034	2	1	****	EK
NOV 16,84	NOV 15,84	855 855	830 1600	1	8.7	2	41036	2	1	107	
NOV 17,84	NOV 16,84	855 900	1100 1800	2	5.2	2	41037	2	1	45	N
NOV 18,84	NOV 17,84	900 855	700 1000	2	5.3	2	41038	2	1	50	
NOV 19,84	NOV 18,84	855 855	600 1000	2	0.3	2	41039	2	1	62	
NOV 29,84	NOV 28,84	855 855	1300 1600	1	4.0	2	41040	2	1	116	
DEC 1,84	NOV 30,84	855 855	1300 1600	3	0.2	2	41041	2	1	507	N
DEC 2,84	DEC 1,84	855 855	1330 1600	2	1.1	2	41042	2	1	31	N
DEC 3,84	DEC 2,84	855 900	600 900	2	1.4	2	41043	2	1	79	
DEC 4,84	DEC 3,84	900 855	800 1300	2	3.4	2	41044	2	1	87	
DEC 5,84	DEC 4,84	855 850	845 1600	2	5.8	2	41045	2	1	61	JC
DEC 6,84	DEC 5,84	850 859	2215 540	2	6.8	2	41046	2	1	83	
DEC 7,84	DEC 6,84	859 845	1100 1300	2	0.6	2	41047	2	1	44	N
DEC 13,84	DEC 12,84	855 855	930 1700	1	12.6	2	41049	2	1	96	
DEC 15,84	DEC 14,84	855 850	1030 1430	3	4.0	2	41050	2	1	35	N
DEC 18,84	DEC 17,84	850 900	1000 1130	2	0.3	2	41051	2	1	88	
DEC 19,84	DEC 18,84	900 915	815 1100	2	1.4	2	41052	2	1	79	C
DEC 20,84	DEC 19,84	915 855	800 1300	2	4.0	2	41053	2	1	70	
DEC 21,84	DEC 20,84	915 850	730 2200	2	1.8	2	41054	2	1	49	N
DEC 22,84	DEC 21,84	850 850	1500 2000	3	13.6	2	41055	2	1	58	
DEC 23,84	DEC 22,84	850 900	1000 1200	2	1.6	2	41056	2	1	34	N
DEC 24,84	DEC 23,84	900 900	1000 1130	2	3.5	2	41057	2	1	57	
DEC 25,84	DEC 24,84	900 900	730 2330	2	8.6	2	41058	2	1	72	C
DEC 26,84	DEC 25,84	900 900	800 1400	2	2.1	2	41059	2	1	20	N
DEC 27,84	DEC 26,84	900 900	****	2	0.6	2	41060	2	1	****	EFIK
DEC 28,84	DEC 27,84	900 900	830 1300	1	5.8	2	41061	2	1	U 72	F
DEC 29,84	DEC 28,84	900 900	1700 100	1	12.2	2	41062	2	1	U 101	F
DEC 30,84	DEC 29,84	900 915	900 1400	1	2.4	2	41065	2	1	139	N

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

#05

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
NOV 10,84	NOV 9,84	839.0	44.1	4.07	4.04	0.1134	3.10	0.81
NOV 11,84	NOV 10,84	1170.0	20.1	4.41	4.42	0.0562	1.50	0.36
NOV 12,84	NOV 11,84	250.0	D 35.5	4.13	4.11	0.0988	2.85	0.41
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	599.0	34.3	4.14	4.21	0.0896	3.00	0.53
NOV 17,84	NOV 16,84	153.0	8.0	*****	5.02	0.0280	0.90	0.09
NOV 18,84	NOV 17,84	172.0	23.9	4.44	4.62	0.0508	1.90	0.93
NOV 19,84	NOV 18,84	12.0	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	298.0	21.9	4.21	4.53	0.0562	2.10	0.41
DEC 1,84	NOV 30,84	65.0	64.6	*****	3.90	0.1468	3.05	2.15
DEC 2,84	DEC 1,84	22.0	*****	*****	*****	*****	*****	*****
DEC 3,84	DEC 2,84	71.0	19.3	*****	4.55	0.0498	1.20	0.60
DEC 4,84	DEC 3,84	191.0	D 17.1	4.35	4.66	0.0478	1.30	D 0.42
DEC 5,84	DEC 4,84	229.0	3.5	G 5.85	G 6.54	0.0148	0.30	0.09
DEC 6,84	DEC 5,84	365.0	11.3	4.45	4.64	0.0374	0.15	D 0.38
DEC 7,84	DEC 6,84	17.0	*****	*****	*****	*****	*****	*****
DEC 13,84	DEC 12,84	776.0	42.3	3.96	4.10	0.1138	3.25	0.58
DEC 15,84	DEC 14,84	92.0	37.6	*****	4.14	0.0976	2.85	0.65
DEC 18,84	DEC 17,84	17.0	*****	*****	4.22	0.1096	*****	*****
DEC 19,84	DEC 18,84	71.0	23.5	*****	4.47	0.2062	2.15	0.50
DEC 20,84	DEC 19,84	182.0	14.0	4.55	4.74	0.0380	0.65	0.46
DEC 21,84	DEC 20,84	57.0	12.2	*****	G 6.34	0.0164	1.45	0.56
DEC 22,84	DEC 21,84	506.0	16.0	4.36	4.57	0.0500	0.70	0.30
DEC 23,84	DEC 22,84	35.0	*****	*****	*****	*****	*****	*****
DEC 24,84	DEC 23,84	130.0	36.2	*****	4.39	0.0732	2.00	D 1.56
DEC 25,84	DEC 24,84	400.0	33.5	4.07	4.22	0.0864	1.50	0.90
DEC 26,84	DEC 25,84	27.0	*****	*****	4.92	0.0326	*****	*****
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	270.0	19.6	4.29	4.45	0.0584	1.60	0.21
DEC 29,84	DEC 28,84	794.0	16.6	4.41	4.63	0.0428	1.60	0.31
DEC 30,84	DEC 29,84	214.0	14.7	4.49	4.81	0.0364	1.60	0.28

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAVEN LAKE/DAILY/AEROCHEM

#05

PAGE : 12

REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIN MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
NOV 10,84	NOV 9,84	0.10	0.24	0.015	0.020	0.080	0.405	0.0912
NOV 11,84	NOV 10,84	0.08	0.08	0.010	<M 0.005	0.020	0.200	0.0380
NOV 12,84	NOV 11,84	0.03	0.09	0.005	<T 0.005	0.020	0.130	0.0776
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	0.17	0.23	0.010	0.015	0.030	0.445	0.0617
NOV 17,84	NOV 16,84	0.17	0.12	0.015	0.035	0.075	0.050	0.0095
NOV 18,84	NOV 17,84	0.61	0.25	0.050	0.055	0.115	0.620	0.0240
NOV 19,84	NOV 18,84	*****	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	0.20	0.17	0.025	0.015	0.070	0.345	0.0295
DEC 1,84	NOV 30,84	*****	0.37	*****	*****	*****	0.735	0.1259
DEC 2,84	DEC 1,84	*****	*****	*****	*****	*****	*****	*****
DEC 3,84	DEC 2,84	0.27	0.32	0.010	0.100	0.175	0.315	0.0282
DEC 4,84	DEC 3,84	0.05	0.10	<M 0.005	<T 0.005	0.025	0.345	0.0219
DEC 5,84	DEC 4,84	0.42	0.05	0.010	<M 0.005	0.010	0.040	G 0.0003
DEC 6,84	DEC 5,84	0.12	0.07	<M 0.005	<M 0.005	<T 0.005	0.025	0.0229
DEC 7,84	DEC 6,84	*****	*****	*****	*****	*****	*****	*****
DEC 13,84	DEC 12,84	0.06	0.26	<T 0.010	0.100	0.055	0.350	0.0794
DEC 15,84	DEC 14,84	0.24	D 0.20	0.025	0.110	0.165	0.205	0.0724
DEC 18,84	DEC 17,84	*****	*****	*****	*****	*****	*****	0.0603
DEC 19,84	DEC 18,84	*****	0.19	*****	*****	*****	0.330	0.0339
DEC 20,84	DEC 19,84	0.45	0.20	0.025	<T 0.020	0.055	0.045	0.0182
DEC 21,84	DEC 20,84	*****	0.19	*****	*****	*****	0.340	G 0.0005
DEC 22,84	DEC 21,84	<T 0.04	<T 0.02	<T 0.005	<T 0.020	<T 0.020	0.070	0.0269
DEC 23,84	DEC 22,84	*****	*****	*****	*****	*****	*****	*****
DEC 24,84	DEC 23,84	G 1.14	0.53	G 0.170	0.090	0.245	0.565	0.0407
DEC 25,84	DEC 24,84	0.17	0.20	<T 0.015	0.060	0.040	0.345	0.0603
DEC 26,84	DEC 25,84	*****	*****	*****	*****	*****	*****	0.0120
DEC 27,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 27,84	0.08	0.08	<T 0.005	0.040	0.040	0.070	0.0355
DEC 29,84	DEC 28,84	0.07	0.11	<T 0.015	0.060	0.100	0.365	0.0234
DEC 30,84	DEC 29,84	0.10	0.10	<T 0.010	0.040	0.070	0.400	0.0155



**PART V**

**SOUTHEASTERN REGION**

**DAILY PRECIPITATION CHEMISTRY LISTINGS**

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	930 930	100 800	2	2.8	2	23487	2	1	36	N
JAN 6,84	JAN 5,84	900 830	2300 600	3	3.7	2	23488	2	1	41	N
JAN 10,84	JAN 9,84	900 800	100 600	2	7.0	2	23489	2	1	37	N
JAN 14,84	JAN 13,84	900 1200	2000 1200	2	8.5	2	23490	2	1	38	N
JAN 15,84	JAN 14,84	1200 1000	1200 200	1	1.3	2	23491	2	1	****	E
JAN 22,84	JAN 21,84	800 800	****	2	****	*	23492	2	1	****	
JAN 24,84	JAN 23,84	900 815	100 815	2	4.1	2	23493	2	1	44	N
JAN 25,84	JAN 24,84	815 1000	815 1500	3	3.4	2	23494	2	1	57	
JAN 28,84	JAN 27,84	600 830	615 1500	3	4.2	2	23495	2	1	39	N
FEB 4,84	FEB 3,84	900 1000	1100 700	1	3.0	2	23496	2	1	86	
FEB 14,84	FEB 13,84	800 800	100 1000	1	6.5	2	23497	2	1	109	
FEB 15,84	FEB 14,84	1000 1000	1000 2400	1	14.9	2	23498	2	1	72	
FEB 18,84	FEB 17,84	900 1000	1830 800	1	6.6	2	23499	2	1	69	
FEB 20,84	FEB 19,84	900 900	1400 700	1	****	2	92001	2	1	****	
FEB 26,84	FEB 25,84	900 900	1100 600	2	5.1	2	92003	2	1	44	N
FEB 28,84	FEB 27,84	900 900	300 900	2	****	*	92004	2	1	****	C
FEB 29,84	FEB 28,84	900 900	300 700	2	42.4	2	92005	2	1	31	NC
MAR 6,84	MAR 5,84	900 900	400 2300	2	****	*	92007	2	1	****	
MAR 11,84	MAR 10,84	900 900	1200 800	2	2.2	2	92008	2	1	43	N
MAR 14,84	MAR 13,84	700 1000	730 100	2	9.9	2	92009	2	1	55	G
MAR 17,84	MAR 16,84	800 900	1200 2200	3	2.2	2	92010	2	1	31	N
MAR 22,84	MAR 21,84	900 900	1600 700	1	1.3	2	92011	2	1	70	
MAR 23,84	MAR 22,84	900 700	1100 700	3	5.6	2	92012	2	1	60	
APR 5,84	APR 4,84	800 750	1200 1750	1	25.0	2	92013	2	1	93	
APR 6,84	APR 5,84	750 900	750 1000	1	32.0	2	92016	2	1	86	C
APR 14,84	APR 13,84	900 900	1600 2200	1	4.4	1	92017	2	1	45	N
APR 15,84	APR 14,84	900 900	2300 900	1	11.5	1	92018	2	1	83	JC
APR 16,84	APR 15,84	900 1000	900 1000	1	16.8	1	92019	2	1	83	C
APR 17,84	APR 16,84	1000 1745	1000 1745	1	9.3	1	92020	2	1	65	HM
APR 18,84	APR 17,84	1745 750	1800 2300	1	12.4	1	92021	2	1	95	
APR 24,84	APR 23,84	800 750	1000 500	1	15.4	1	92022	2	1	34	G
APR 25,84	APR 24,84	750 745	1100 745	1	10.8	1	92023	2	1	72	D
APR 29,84	APR 28,84	900 900	1630 2300	1	3.4	1	92024	2	1	99	
MAY 1,84	APR 30,84	800 745	900 1200	1	2.4	1	92025	2	1	61	
MAY 5,84	MAY 4,84	530 900	600 1730	1	25.8	1	92027	2	1	83	G
MAY 8,84	MAY 7,84	800 750	2000 700	1	1.4	1	92030	2	1	43	
MAY 9,84	MAY 8,84	750 750	830 1730	1	13.8	1	92031	2	1	67	N
MAY 12,84	MAY 11,84	800 800	900 2100	1	13.0	1	92032	2	1	90	C
MAY 14,84	MAY 13,84	800 750	1600 600	1	2.6	1	92033	2	1	43	N
MAY 16,84	MAY 15,84	750 750	2300 500	1	1.8	1	92034	2	1	75	M

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	65.0	*****	*****	4.08	0.1196	0.45	1.33
JAN 6,84	JAN 5,84	98.0	*****	*****	4.03	0.1274	3.80	0.93
JAN 10,84	JAN 9,84	168.0	9.8	*****	4.85	0.0326	0.25	0.26
JAN 14,84	JAN 13,84	208.0	27.5	*****	4.29	0.0754	0.70	0.85
JAN 15,84	JAN 14,84	*****	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 21,84	13.0	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	116.0	25.3	*****	4.30	0.0658	1.65	0.58
JAN 25,84	JAN 24,84	126.0	29.3	*****	4.21	0.0824	2.15	0.48
JAN 28,84	JAN 27,84	105.0	22.3	*****	4.44	0.0608	0.35	0.87
FEB 4,84	FEB 3,84	166.0	32.1	*****	4.23	0.0920	2.05	0.67
FEB 14,84	FEB 13,84	456.0	11.6	*****	4.91	0.0328	0.70	0.11
FEB 15,84	FEB 14,84	696.0	11.5	*****	D 4.93	0.0320	0.65	0.11
FEB 18,84	FEB 17,84	295.0	17.0	*****	4.48	0.0556	1.25	0.28
FEB 20,84	FEB 19,84	46.0	47.3	*****	4.03	0.1266	2.90	1.00
FEB 26,84	FEB 25,84	146.0	35.6	*****	4.15	0.1080	2.05	0.83
FEB 28,84	FEB 27,84	473.0	4.6	*****	G 5.99	0.0172	0.25	0.12
FEB 29,84	FEB 28,84	865.0	4.7	*****	5.36	0.0218	0.35	0.09
MAR 6,84	MAR 5,84	417.0	23.1	*****	4.29	0.0692	0.75	0.60
MAR 11,84	MAR 10,84	62.0	*****	*****	3.95	0.1380	1.20	1.85
MAR 14,84	MAR 13,84	351.0	12.6	4.61	4.66	0.0408	0.70	0.33
MAR 17,84	MAR 16,84	44.0	*****	*****	4.08	0.1130	3.75	0.72
MAR 22,84	MAR 21,84	59.0	*****	*****	4.90	0.0350	1.00	0.19
MAR 23,84	MAR 22,84	216.0	30.0	*****	4.26	0.0862	2.00	0.58
APR 5,84	APR 4,84	1502.0	7.9	*****	4.95	0.0280	0.80	0.09
APR 6,84	APR 5,84	1779.0	5.7	*****	B 6.53	0.0226	0.60	0.13
APR 14,84	APR 13,84	129.0	D 48.9	*****	4.07	0.1164	D 4.00	D 0.98
APR 15,84	APR 14,84	616.0	6.5	4.79	5.28	0.0304	0.55	0.05
APR 16,84	APR 15,84	894.0	5.2	5.01	5.37	0.0264	0.40	0.04
APR 17,84	APR 16,84	392.0	7.1	4.87	5.02	0.0318	0.50	D 0.50
APR 18,84	APR 17,84	758.0	31.9	4.24	4.22	0.0902	2.70	0.46
APR 24,84	APR 23,84	341.0	*****	*****	G 5.44	0.0256	*****	*****
APR 25,84	APR 24,84	504.0	11.4	4.78	4.79	0.0430	1.15	0.17
APR 29,84	APR 28,84	217.0	86.6	3.79	3.78	0.2240	8.20	1.32
MAY 1,84	APR 30,84	95.0	*****	*****	4.47	0.0646	2.65	0.24
MAY 5,84	MAY 4,84	1374.0	11.4	4.74	4.74	0.0426	1.00	0.15
MAY 8,84	MAY 7,84	39.0	*****	*****	3.66	0.2880	10.50	1.90
MAY 9,84	MAY 8,84	600.0	29.8	4.25	4.18	0.0828	2.80	0.27
MAY 12,84	MAY 11,84	752.0	49.9	4.08	4.10	0.1196	4.60	0.91
MAY 14,84	MAY 13,84	73.0	*****	*****	4.57	0.0650	4.30	1.39
MAY 16,84	MAY 15,84	87.0	*****	*****	4.47	0.0628	3.50	0.09

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	*****	0.35	*****	*****	*****	*****	0.0832
JAN 6,84	JAN 5,84	*****	0.13	*****	*****	*****	0.460	0.0933
JAN 10,84	JAN 9,84	0.05	0.04	0.010	<T 0.005	0.015	0.044	0.0141
JAN 14,84	JAN 13,84	0.04	0.16	0.010	<W 0.005	0.060	0.218	0.0513
JAN 15,84	JAN 14,84	*****	*****	*****	*****	*****	*****	*****
JAN 22,84	JAN 21,84	*****	*****	*****	*****	*****	*****	*****
JAN 24,84	JAN 23,84	0.06	0.08	0.010	0.020	0.050	0.290	0.0501
JAN 25,84	JAN 24,84	0.06	0.11	0.005	<T 0.015	0.050	0.220	0.0617
JAN 28,84	JAN 27,84	0.28	0.10	0.020	<T 0.010	0.050	0.160	0.0363
FEB 4,84	FEB 3,84	0.10	0.16	0.010	0.025	0.055	0.300	0.0589
FEB 14,84	FEB 13,84	0.10	0.88	0.070	<T 0.015	G 0.535	<T 0.002	0.0123
FEB 15,84	FEB 14,84	0.06	1.05	0.075	<T 0.015	G 0.625	0.040	D 0.0117
FEB 18,84	FEB 17,84	0.05	*****	0.010	<T 0.010	<T 0.010	0.062	0.0331
FEB 20,84	FEB 19,84	*****	0.19	*****	*****	*****	0.314	0.0933
FEB 26,84	FEB 25,84	0.08	0.11	0.010	<T 0.010	<W 0.005	0.420	0.0708
FEB 28,84	FEB 27,84	0.21	0.05	0.015	0.035	0.065	0.026	G 0.0010
FEB 29,84	FEB 28,84	0.15	0.04	0.015	<T 0.010	0.025	0.026	0.0044
MAR 6,84	MAR 5,84	0.06	0.14	0.010	<T 0.005	0.020	0.072	0.0513
MAR 11,84	MAR 10,84	*****	0.92	*****	*****	*****	0.122	0.1122
MAR 14,84	MAR 13,84	0.05	0.07	0.010	<T 0.010	0.030	0.148	0.0219
MAR 17,84	MAR 16,84	*****	0.19	*****	*****	*****	*****	0.0832
MAR 22,84	MAR 21,84	*****	0.37	*****	*****	*****	0.044	0.0126
MAR 23,84	MAR 22,84	0.10	0.09	0.015	<W 0.005	0.015	0.248	0.0550
APR 5,84	APR 4,84	0.03	0.03	0.005	<W 0.005	<T 0.010	0.116	0.0112
APR 6,84	APR 5,84	D 0.41	0.05	D 0.055	D 0.135	D 0.095	D 0.264	B 0.0003
APR 14,84	APR 13,84	0.18	0.12	0.050	0.015	0.075	0.830	0.0851
APR 15,84	APR 14,84	0.02	<T 0.02	0.010	<T 0.010	<T 0.010	0.095	0.0052
APR 16,84	APR 15,84	0.03	<W 0.01	<W 0.005	<T 0.005	<T 0.005	0.080	0.0043
APR 17,84	APR 16,84	0.03	0.08	<W 0.005	<W 0.005	<W 0.005	0.100	0.0095
APR 18,84	APR 17,84	0.06	0.04	0.020	<T 0.005	<T 0.005	0.375	0.0603
APR 24,84	APR 23,84	*****	*****	*****	*****	*****	*****	G 0.0036
APR 25,84	APR 24,84	0.14	0.04	0.020	0.020	0.065	0.140	0.0162
APR 29,84	APR 28,84	0.87	0.40	0.110	0.115	0.185	0.555	0.1660
MAY 1,84	APR 30,84	0.26	0.12	0.040	0.065	0.080	0.335	0.0339
MAY 5,84	MAY 4,84	0.03	0.03	0.005	<T 0.010	0.020	0.125	0.0182
MAY 8,84	MAY 7,84	*****	0.30	*****	*****	*****	*****	0.2188
MAY 9,84	MAY 8,84	0.05	0.04	0.010	<T 0.010	0.020	0.100	0.0661
MAY 12,84	MAY 11,84	0.40	0.17	0.045	0.045	0.030	0.625	0.0794
MAY 14,84	MAY 13,84	*****	0.29	*****	*****	*****	1.500	0.0269
MAY 16,84	MAY 15,84	0.23	0.07	0.055	0.065	0.060	0.160	0.0339

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
MAY 23,84	MAY 22,84	800 800	100 700	1	16.4	1	92036	2	1	92	D
MAY 24,84	MAY 23,84	800 755	1000 ****	1	33.5	1	92037	2	1	97	BC
MAY 28,84	MAY 27,84	800 755	900 755	1	21.4	1	92040	2	1	70	
MAY 29,84	MAY 28,84	755 750	255 830	1	2.0	1	92041	2	1	24	N
JUN 18,84	JUN 17,84	800 800	400 830	1	6.0	1	92042	2	1	87	
JUN 19,84	JUN 18,84	830 800	830 1300	1	8.4	1	92043	2	1	85	M
JUN 24,84	JUN 23,84	800 900	200 900	1	8.0	1	92044	2	1	87	
JUN 25,84	JUN 24,84	900 1000	**** ****	1	13.8	1	92945	2	1	52	
JUN 28,84	JUN 27,84	900 1000	1400 1800	1	5.0	1	92046	2	1	73	D
JUL 7,84	JUL 6,84	800 800	1500 1800	1	2.2	1	92047	2	1	91	D
JUL 12,84	JUL 11,84	700 800	750 900	1	24.0	1	92048	2	1	99	
JUL 16,84	JUL 15,84	800 800	1300 300	1	9.4	1	92051	2	1	102	
JUL 18,84	JUL 17,84	900 1000	100 600	1	13.6	1	92052	2	1	101	Z
JUL 19,84	JUL 18,84	1000 900	1300 1600	1	36.1	1	92053	2	1	103	
JUL 28,84	JUL 27,84	900 900	1530 1900	1	11.6	1	92054	2	1	99	
AUG 2,84	AUG 1,84	800 900	1400 1600	1	6.2	1	92055	2	1	99	C
AUG 8,84	AUG 7,84	800 800	1300 1900	1	3.0	1	92056	2	1	85	
AUG 10,84	AUG 9,84	800 800	1000 1200	1	0.6	1	92057	2	1	****	E
AUG 13,84	AUG 12,84	800 845	1400 800	1	23.6	1	92058	2	1	29	N
AUG 14,84	AUG 13,84	845 745	845 1300	1	2.4	1	92059	2	1	88	
AUG 15,84	AUG 14,84	1745 745	745 300	1	11.0	1	92060	2	1	96	
AUG 23,84	AUG 22,84	800 1200	1600 700	1	12.4	1	92063	2	1	97	J
AUG 29,84	AUG 28,84	800 1200	1500 1900	1	1.2	1	92064	2	1	299	N
AUG 30,84	AUG 29,84	1200 1200	2000 600	1	9.2	1	92065	2	1	77	
SEP 10,84	SEP 9,84	800 750	200 250	1	1.8	1	92068	2	1	73	
SEP 11,84	SEP 10,84	750 745	750 2200	1	10.4	1	92069	2	1	96	Z
SEP 12,84	SEP 11,84	745 745	**** ****	1	11.6	1	92070	2	1	99	
SEP 14,84	SEP 13,84	745 745	900 1100	1	0.6	1	92071	2	1	****	E
SEP 17,84	SEP 16,84	745 800	1200 1800	1	1.0	1	92072	2	1	****	E
SEP 26,84	SEP 25,84	800 830	100 500	1	1.4	2	92073	2	1	69	D
SEP 30,84	SEP 29,84	800 830	1700 1900	1	0.4	1	92074	2	1	****	E
OCT 3,84	OCT 2,84	800 800	715 800	1	4.3	1	92075	2	1	96	H
OCT 4,84	OCT 3,84	800 900	800 1700	1	14.0	1	92076	2	1	94	C
OCT 8,84	OCT 7,84	800 900	500 900	1	1.2	1	92077	2	1	74	CD
OCT 9,84	OCT 8,84	900 900	1200 200	1	****	*	92078	2	1	****	C
OCT 19,84	OCT 18,84	800 800	1300 1400	1	0.2	1	92079	2	1	****	E
OCT 20,84	OCT 19,84	800 900	1100 100	1	2.4	2	92080	2	1	79	D
OCT 22,84	OCT 21,84	900 600	930 1400	1	8.4	1	92081	2	1	87	
OCT 26,84	OCT 25,84	800 745	2300 300	1	2.9	1	92082	2	1	104	C
NOV 2,84	NOV 1,84	800 800	1900 2300	1	6.4	1	92085	2	1	97	C

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAY 23,84	MAY 22,84	971.0	46.5	4.22	4.20	0.0982	4.75	0.92
MAY 24,84	MAY 23,84	2092.0	10.4	4.77	4.71	0.0376	1.10	0.06
MAY 28,84	MAY 27,84	962.0	14.4	4.68	4.53	0.0474	1.25	0.18
MAY 29,84	MAY 28,84	32.0	*****	*****	4.79	0.0364	0.95	0.12
JUN 18,84	JUN 17,84	337.0	9.0	4.70	4.86	0.0312	0.70	0.10
JUN 19,84	JUN 18,84	461.0	7.6	D 4.77	4.90	0.0288	0.90	0.05
JUN 24,84	JUN 23,84	449.0	45.7	*****	4.00	0.1176	5.15	0.41
JUN 25,84	JUN 24,84	463.0	58.7	*****	3.90	0.1464	6.35	0.58
JUN 28,84	JUN 27,84	236.0	72.3	3.79	3.79	0.1810	7.00	0.88
JUL 7,84	JUL 6,84	129.0	25.4	*****	4.23	0.0854	3.65	0.34
JUL 12,84	JUL 11,84	1535.0	37.3	4.11	4.10	0.0978	3.70	0.46
JUL 16,84	JUL 15,84	615.0	> 100.0	3.58	3.58	0.2880	11.75	1.28
JUL 18,84	JUL 17,84	887.0	72.9	3.80	3.80	0.1834	6.40	0.93
JUL 19,84	JUL 18,84	2384.0	22.5	4.29	4.30	0.0652	2.00	0.27
JUL 28,84	JUL 27,84	737.0	14.4	4.58	4.75	0.0396	1.65	0.33
AUG 2,84	AUG 1,84	395.0	18.3	4.38	4.48	0.0524	1.90	0.29
AUG 8,84	AUG 7,84	164.0	38.0	*****	4.21	0.0940	5.35	0.64
AUG 10,84	AUG 9,84	*****	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	442.0	35.0	*****	4.11	0.0922	3.00	0.49
AUG 14,84	AUG 13,84	136.0	48.5	*****	3.99	0.1178	3.40	1.07
AUG 15,84	AUG 14,84	682.0	26.0	*****	4.19	0.1156	1.75	0.42
AUG 23,84	AUG 22,84	776.0	47.0	4.50	4.01	0.1186	4.40	0.35
AUG 29,84	AUG 28,84	230.0	100.0	*****	3.67	0.2480	10.00	0.83
AUG 30,84	AUG 29,84	459.0	42.5	*****	4.09	0.1058	4.20	0.63
SEP 10,84	SEP 9,84	85.0	*****	*****	3.92	0.1428	5.20	0.76
SEP 11,84	SEP 10,84	642.0	50.0	*****	3.99	0.1260	4.20	*****
SEP 12,84	SEP 11,84	742.0	7.0	*****	4.85	0.0322	0.50	0.07
SEP 14,84	SEP 13,84	*****	*****	*****	*****	*****	*****	*****
SEP 17,84	SEP 16,84	*****	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	62.0	*****	*****	3.98	0.1354	5.80	0.94
SEP 30,84	SEP 29,84	*****	*****	*****	*****	*****	*****	*****
OCT 3,84	OCT 2,84	265.0	45.8	*****	4.26	0.0878	4.10	1.79
OCT 4,84	OCT 3,84	850.0	25.8	*****	4.79	0.0448	3.85	0.76
OCT 8,84	OCT 7,84	57.0	*****	*****	3.48	G 0.3440	10.70	1.94
OCT 9,84	OCT 8,84	54.0	*****	*****	3.23	G 0.6480	G 22.40	G 3.67
OCT 19,84	OCT 18,84	*****	*****	*****	*****	*****	*****	*****
OCT 20,84	OCT 19,84	122.0	68.0	*****	3.85	0.1586	5.65	1.08
OCT 22,84	OCT 21,84	471.0	56.5	3.99	3.99	D 0.1322	5.15	D 0.68
OCT 26,84	OCT 25,84	195.0	19.8	*****	4.54	0.0482	1.60	0.40
NOV 2,84	NOV 1,84	401.0	63.5	*****	3.92	0.1438	4.95	1.23

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
MAY 23,84	MAY 22,84	0.27	0.15	A 0.040	0.035	0.050	D 1.200	0.0631
MAY 24,84	MAY 23,84	0.04	0.04	<W 0.005	0.020	<W 0.005	0.060	0.0195
MAY 28,84	MAY 27,84	0.06	0.03	<W 0.005	<W 0.005	<T 0.005	0.060	0.0295
MAY 29,84	MAY 28,84	*****	0.06	*****	*****	*****	*****	0.0162
JUN 18,84	JUN 17,84	0.05	0.05	0.010	<T 0.005	0.015	0.060	0.0138
JUN 19,84	JUN 18,84	<T 0.02	0.09	0.005	<W 0.005	0.025	0.080	0.0126
JUN 24,84	JUN 23,84	0.20	0.20	0.035	0.045	0.135	0.440	0.1000
JUN 25,84	JUN 24,84	0.11	0.15	0.020	0.035	0.045	0.690	0.1259
JUN 28,84	JUN 27,84	0.39	0.23	0.065	0.045	<W 0.005	0.445	0.1622
JUL 7,84	JUL 6,84	0.19	0.10	0.030	<T 0.015	<T 0.005	0.225	0.0589
JUL 12,84	JUL 11,84	0.11	0.08	0.010	<T 0.005	0.015	0.405	0.0794
JUL 16,84	JUL 15,84	0.60	0.22	0.125	0.025	<T 0.010	0.595	0.2630
JUL 18,84	JUL 17,84	0.43	0.22	0.080	0.025	<T 0.010	0.370	0.1585
JUL 19,84	JUL 18,84	0.07	0.06	0.010	<W 0.005	<W 0.005	0.150	0.0501
JUL 28,84	JUL 27,84	0.24	0.09	0.070	0.020	<T 0.005	0.365	0.0178
AUG 2,84	AUG 1,84	0.27	0.09	0.050	0.020	<T 0.010	0.120	0.0331
AUG 8,84	AUG 7,84	0.45	0.18	0.120	G 0.345	0.030	0.670	0.0617
AUG 10,84	AUG 9,84	*****	*****	*****	*****	*****	*****	*****
AUG 13,84	AUG 12,84	0.08	0.12	0.010	<T 0.005	0.025	0.320	0.0776
AUG 14,84	AUG 13,84	0.29	0.41	0.045	0.020	0.215	0.545	0.1023
AUG 15,84	AUG 14,84	0.03	0.09	0.005	<W 0.005	<T 0.005	0.075	0.0646
AUG 23,84	AUG 22,84	0.05	0.06	0.005	<W 0.005	<W 0.005	0.170	0.0977
AUG 29,84	AUG 28,84	0.35	0.23	0.060	<W 0.005	0.135	0.470	0.2138
AUG 30,84	AUG 29,84	0.26	0.14	0.050	0.015	0.065	0.435	0.0813
SEP 10,84	SEP 9,84	0.34	G 1.14	0.135	0.040	G 0.785	0.165	0.1202
SEP 11,84	SEP 10,84	0.11	0.38	0.050	<T 0.005	0.245	0.310	0.1023
SEP 12,84	SEP 11,84	<T 0.01	0.03	<W 0.005	<W 0.005	<T 0.005	0.020	0.0141
SEP 14,84	SEP 13,84	*****	*****	*****	*****	*****	*****	*****
SEP 17,84	SEP 16,84	*****	*****	*****	*****	*****	*****	*****
SEP 26,84	SEP 25,84	*****	0.24	*****	*****	*****	0.665	0.1047
SEP 30,84	SEP 29,84	*****	*****	*****	*****	*****	*****	*****
OCT 3,84	OCT 2,84	1.63	0.28	0.360	0.140	0.040	1.000	0.0550
OCT 4,84	OCT 3,84	1.01	0.13	0.165	0.065	0.020	0.950	0.0162
OCT 8,84	OCT 7,84	*****	0.38	*****	*****	*****	0.280	0.3311
OCT 9,84	OCT 8,84	*****	G 0.91	*****	*****	*****	1.400	0.5888
OCT 19,84	OCT 18,84	*****	*****	*****	*****	*****	*****	*****
OCT 20,84	OCT 19,84	0.51	0.36	0.060	0.065	0.180	0.350	0.1413
OCT 22,84	OCT 21,84	0.07	0.25	0.020	0.075	0.140	0.470	0.1023
OCT 26,84	OCT 25,84	0.20	0.07	0.020	<T 0.010	0.030	0.215	0.0288
NOV 2,84	NOV 1,84	0.46	0.36	0.090	0.070	0.200	0.510	0.1202



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
NOV 5,84	NOV 4,84	800 815	1700 815	1	10.0	1	92086	2	1	102	C
NOV 6,84	NOV 5,84	815 800	845 1100	1	1.1	1	92087	2	1	U 79	CF
NOV 9,84	NOV 8,84	800 830	500 600	1	0.5	1	92088	2	1	59	C
NOV 10,84	NOV 9,84	830 900	1600 600	1	5.0	1	92089	2	1	122	C N
NOV 11,84	NOV 10,84	900 800	1400 800	1	8.8	1	92091	2	1	99	
NOV 12,84	NOV 11,84	800 830	800 830	1	6.4	1	92092	2	1	95	
NOV 13,84	NOV 12,84	830 815	**** ****	1	0.7	1	92093	2	1	****	EF
NOV 16,84	NOV 15,84	800 600	**** ****	1	1.2	2	92094	2	1	158	D N
NOV 19,84	NOV 18,84	800 800	800 1900	3	1.1	1	92095	2	1	137	C N
NOV 23,84	NOV 22,84	800 815	600 745	3	****	*	92096	2	1	****	CE
NOV 29,84	NOV 28,84	800 800	1530 800	1	4.1	1	92097	2	1	101	C
NOV 30,84	NOV 29,84	800 900	1000 1900	3	6.7	2	92098	2	1	95	
DEC 1,84	NOV 30,84	900 1000	1700 300	1	1.3	2	92099	2	1	139	C N
DEC 4,84	DEC 3,84	800 630	1000 300	3	9.5	2	92100	2	1	97	BC
DEC 6,84	DEC 5,84	800 815	300 815	2	8.2	2	92101	2	1	78	CD C
DEC 7,84	DEC 6,84	815 615	815 1200	2	2.0	2	92102	2	1	62	D
DEC 13,84	DEC 12,84	800 600	1900 600	1	1.9	2	92103	2	1	115	C
DEC 14,84	DEC 13,84	600 800	1200 500	3	8.3	2	92104	2	1	65	
DEC 19,84	DEC 18,84	800 830	1400 1430	2	0.8	2	92105	2	1	62	C
DEC 20,84	DEC 19,84	830 745	1100 1900	2	5.0	2	92106	2	1	95	
DEC 22,84	DEC 21,84	800 1000	1700 100	3	11.4	2	92107	2	1	102	M
DEC 24,84	DEC 23,84	800 900	1100 1700	2	1.6	2	92108	2	1	80	C
DEC 25,84	DEC 24,84	900 1100	1900 200	2	7.8	2	92109	2	1	79	
DEC 28,84	DEC 27,84	800 1200	100 1000	3	4.8	2	92110	2	1	45	N
DEC 29,84	DEC 28,84	1200 1100	1400 500	3	3.3	2	92111	2	1	116	C

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

PAGE : 8

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
NOV 5,84	NOV 4,84	655.0	22.5	*****	4.37	0.0610	1.65	0.36
NOV 6,84	NOV 5,84	56.0	45.4	*****	4.06	0.1122	3.30	0.87
NOV 9,84	NOV 8,84	19.0	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	394.0	46.6	*****	4.04	0.1140	2.55	1.01
NOV 11,84	NOV 10,84	560.0	58.0	*****	3.92	0.1406	3.80	1.07
NOV 12,84	NOV 11,84	390.0	37.0	*****	4.16	0.0942	2.90	0.61
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	122.0	70.8	*****	3.83	0.1690	5.30	1.29
NOV 19,84	NOV 18,84	97.0	55.3	*****	4.03	0.1178	3.30	1.92
NOV 23,84	NOV 22,84	11.0	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	268.0	26.2	*****	4.33	0.0646	1.70	0.58
NOV 30,84	NOV 29,84	409.0	16.8	*****	4.49	0.0498	1.25	0.27
DEC 1,84	NOV 30,84	116.0	96.2	*****	3.66	0.2340	4.20	2.48
DEC 4,84	DEC 3,84	592.0	22.4	*****	4.35	0.0620	1.50	0.39
DEC 6,84	DEC 5,84	414.0	7.4	*****	5.11	0.0252	0.20	0.29
DEC 7,84	DEC 6,84	80.0	9.2	*****	4.86	0.0336	0.30	0.27
DEC 13,84	DEC 12,84	141.0	96.7	*****	3.79	0.2288	7.05	2.18
DEC 14,84	DEC 13,84	348.0	52.2	*****	4.04	0.1300	3.20	1.20
DEC 19,84	DEC 18,84	32.0	*****	*****	4.50	0.0632	*****	*****
DEC 20,84	DEC 19,84	305.0	10.6	*****	4.92	0.0328	0.90	0.21
DEC 22,84	DEC 21,84	750.0	19.4	*****	4.46	0.0578	0.90	0.45
DEC 24,84	DEC 23,84	83.0	33.8	*****	4.31	0.0782	1.45	1.15
DEC 25,84	DEC 24,84	400.0	31.9	*****	4.15	0.0984	1.95	1.00
DEC 28,84	DEC 27,84	140.0	28.8	*****	4.21	0.0920	3.20	0.42
DEC 29,84	DEC 28,84	247.0	17.3	*****	4.50	0.0526	2.00	0.37

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CHARLESTON LAKE/DAILY/AEROCHEM #11

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
NOV 5,84	NOV 4,84	0.05	0.19	0.005	<M 0.005	0.085	0.145	0.0427
NOV 6,84	NOV 5,84	*****	0.20	*****	*****	*****	0.475	0.0871
NOV 9,84	NOV 8,84	*****	*****	*****	*****	*****	*****	*****
NOV 10,84	NOV 9,84	0.11	0.20	0.010	<M 0.005	0.075	0.325	0.0912
NOV 11,84	NOV 10,84	0.10	0.26	0.010	<T 0.010	0.055	0.445	0.1202
NOV 12,84	NOV 11,84	0.05	0.19	<M 0.005	<T 0.010	0.065	0.510	0.0692
NOV 13,84	NOV 12,84	*****	*****	*****	*****	*****	*****	*****
NOV 16,84	NOV 15,84	0.32	0.28	0.050	0.050	0.075	0.600	0.1479
NOV 19,84	NOV 18,84	G 1.16	0.21	G 0.135	0.110	0.050	0.695	0.0933
NOV 23,84	NOV 22,84	*****	*****	*****	*****	*****	*****	*****
NOV 29,84	NOV 28,84	0.16	0.29	0.040	0.050	0.170	0.220	0.0468
NOV 30,84	NOV 29,84	0.03	0.04	0.005	0.010	<M 0.005	0.165	0.0324
DEC 1,84	NOV 30,84	0.40	0.56	0.045	0.075	0.085	0.790	0.2188
DEC 4,84	DEC 3,84	0.03	0.06	0.010	<T 0.005	<M 0.005	0.265	0.0447
DEC 6,84	DEC 5,84	0.23	<T 0.02	0.020	<T 0.020	<T 0.010	0.015	0.0078
DEC 7,84	DEC 6,84	0.11	0.07	<T 0.005	<M 0.010	<T 0.020	0.040	0.0138
DEC 13,84	DEC 12,84	0.35	0.42	0.060	0.110	0.175	1.200	0.1622
DEC 14,84	DEC 13,84	0.06	0.17	0.020	0.050	0.075	0.535	0.0912
DEC 19,84	DEC 18,84	*****	*****	*****	*****	*****	*****	0.0316
DEC 20,84	DEC 19,84	0.11	0.05	0.020	<T 0.020	0.035	0.140	0.0120
DEC 22,84	DEC 21,84	<T 0.03	0.05	<T 0.010	<T 0.020	<T 0.020	0.065	0.0347
DEC 24,84	DEC 23,84	0.58	0.41	0.115	0.040	0.115	0.300	0.0490
DEC 25,84	DEC 24,84	0.12	0.16	<T 0.015	0.040	0.035	0.390	0.0708
DEC 28,84	DEC 27,84	0.09	0.22	<T 0.015	0.040	0.115	0.330	0.0617
DEC 29,84	DEC 28,84	0.08	0.14	0.020	0.050	0.075	0.390	0.0316

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEN

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 6,84	JAN 5,84	800 800	1300 2200	2	4.6	2	91090	2	1	93	
JAN 22,84	JAN 21,84	800 800	****	2	10.6	2	91092	2	1	****	EF
JAN 25,84	JAN 24,84	800 800	900 1500	3	6.8	2	91094	2	1	64	
JAN 26,84	JAN 25,84	800 800	1900 500	2	3.2	2	91096	2	1	35	N
JAN 30,84	JAN 29,84	800 800	****	2	2.8	2	91098	2	1	13	N
FEB 4,84	FEB 3,84	800 800	1100 2300	3	12.3	2	91100	2	1	44	N
FEB 14,84	FEB 13,84	800 800	400 800	1	3.2	2	91104	2	1	134	N
FEB 15,84	FEB 14,84	800 800	800 2000	1	29.4	2	91106	2	1	95	
FEB 18,84	FEB 17,84	800 800	1900 200	1	7.3	2	91110	2	1	99	
FEB 20,84	FEB 19,84	800 800	2000 2230	1	2.1	2	91112	2	1	78	M
FEB 29,84	FEB 28,84	800 800	800 2300	2	4.4	2	91114	2	1	62	
MAR 17,84	MAR 16,84	800 800	1630 2000	3	10.6	2	91115	2	1	62	C H
MAR 23,84	MAR 22,84	800 800	1630 2000	3	****	*	91117	2	1	****	
APR 5,84	APR 4,84	800 800	2000 800	1	27.2	2	91119	2	1	75	C
APR 6,84	APR 5,84	800 800	800 800	1	25.5	2	91125	2	1	69	
APR 15,84	APR 14,84	800 800	2300 730	1	27.0	1	91133	2	1	27	C N
APR 17,84	APR 16,84	800 800	1100 2300	1	19.0	1	91135	2	1	38	N
APR 24,84	APR 23,84	800 800	1000 800	1	7.2	1	91140	2	1	26	D N
APR 29,84	APR 28,84	800 800	1430 1800	1	14.0	1	91142	2	1	97	
MAY 5,84	MAY 4,84	800 800	930 1900	1	15.8	1	91144	2	1	60	
MAY 10,84	MAY 8,84	800 800	****	1	35.4	1	91146	2	1	95	Z
MAY 23,84	MAY 22,84	800 800	900 1700	1	14.2	1	91149	2	1	82	
MAY 24,84	MAY 23,84	800 800	800 1500	1	5.4	1	91151	2	1	64	
MAY 29,84	MAY 28,84	800 800	800 800	1	22.4	1	91153	2	1	32	NH
JUN 19,84	JUN 18,84	800 800	1700 1830	1	38.2	1	91156	2	1	93	
JUN 25,84	JUN 24,84	800 800	700 1500	1	48.4	1	91159	2	1	15	N
JUN 26,84	JUN 25,84	800 800	1200 1400	1	4.0	1	91163	2	1	88	
JUN 27,84	JUN 26,84	800 800	1400 1830	1	24.4	1	91165	2	1	78	
JUL 18,84	JUL 17,84	800 800	30 430	1	17.8	1	91167	2	1	96	U IC
JUL 19,84	JUL 18,84	800 ****	****	1	7.6	1	91173	2	1	67	
JUL 28,84	JUL 27,84	800 800	800 930	1	1.2	1	91180	2	1	****	EK
AUG 2,84	AUG 1,84	800 800	1400 2200	1	6.0	1	91176	2	1	48	C NJ
AUG 7,84	AUG 6,84	800 800	1600 2400	1	8.4	1	91178	2	1	14	N
AUG 8,84	AUG 7,84	800 800	1500 1600	1	13.2	1	91181	2	1	54	
AUG 11,84	AUG 10,84	800 800	1530 1630	1	18.2	1	91186	2	1	72	
AUG 12,84	AUG 11,84	800 800	250 700	1	26.2	1	91188	2	1	94	
AUG 13,84	AUG 12,84	800 800	230 730	1	32.0	1	91190	2	1	81	
AUG 14,84	AUG 13,84	800 800	230 800	1	37.8	1	91192	2	1	19	N
AUG 15,84	AUG 14,84	800 800	800 1000	1	25.5	1	91185	2	1	88	
AUG 23,84	AUG 22,84	800 800	2000 2300	1	4.4	1	91197	2	1	59	J

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 6,84	JAN 5,84	275.0	65.0	*****	3.90	0.1632	5.75	D 1.15
JAN 22,84	JAN 21,84	*****	*****	*****	*****	*****	*****	*****
JAN 25,84	JAN 24,84	282.0	34.3	4.33	4.28	0.0862	3.30	0.68
JAN 26,84	JAN 25,84	72.0	*****	*****	4.43	0.0630	0.30	0.86
JAN 30,84	JAN 29,84	25.0	*****	*****	G 6.81	0.0226	*****	*****
FEB 4,84	FEB 3,84	350.0	43.3	4.17	4.12	0.1184	3.00	0.89
FEB 14,84	FEB 13,84	276.0	16.8	4.57	4.56	0.0484	1.20	0.31
FEB 15,84	FEB 14,84	1797.0	12.2	4.69	4.67	0.0404	1.05	0.12
FEB 18,84	FEB 17,84	467.0	21.5	*****	4.36	0.0652	1.20	0.47
FEB 20,84	FEB 19,84	106.0	50.2	*****	4.03	0.1270	3.55	1.18
FEB 29,84	FEB 28,84	177.0	20.7	*****	4.40	0.0598	0.55	0.81
MAR 17,84	MAR 16,84	428.0	33.7	4.30	4.49	0.0796	4.40	1.00
MAR 23,84	MAR 22,84	252.0	D 57.5	*****	3.97	0.1538	3.35	1.24
APR 5,84	APR 4,84	1309.0	8.5	*****	5.01	0.0296	0.75	0.10
APR 6,84	APR 5,84	1133.0	11.6	*****	4.65	0.0464	0.70	0.23
APR 15,84	APR 14,84	469.0	14.4	4.56	4.68	0.0454	1.25	0.24
APR 17,84	APR 16,84	464.0	6.0	4.94	5.24	0.0306	0.45	0.09
APR 24,84	APR 23,84	120.0	11.0	*****	5.14	0.0314	1.45	0.24
APR 29,84	APR 28,84	877.0	16.5	4.56	4.55	0.0580	1.70	0.34
MAY 5,84	MAY 4,84	617.0	9.0	4.80	4.89	0.0378	0.85	0.13
MAY 10,84	MAY 8,84	2156.0	43.1	4.14	4.15	0.1104	4.20	0.64
MAY 23,84	MAY 22,84	750.0	25.9	4.34	4.38	0.0662	2.50	0.30
MAY 24,84	MAY 23,84	223.0	11.9	4.70	4.62	0.0468	D 1.10	D 0.16
MAY 29,84	MAY 28,84	468.0	11.1	4.69	5.05	0.0350	1.45	0.21
JUN 19,84	JUN 18,84	2297.0	23.2	4.26	4.37	0.0682	2.45	0.27
JUN 25,84	JUN 24,84	467.0	36.8	*****	4.09	0.1052	3.90	0.36
JUN 26,84	JUN 25,84	228.0	13.0	G 5.47	G 5.94	0.0186	1.65	0.52
JUN 27,84	JUN 26,84	1227.0	49.7	3.90	3.95	0.1312	5.30	0.56
JUL 18,84	JUL 17,84	1097.0	36.0	4.08	4.12	0.0918	3.45	0.51
JUL 19,84	JUL 18,84	328.0	34.5	*****	4.15	0.0894	3.35	0.54
JUL 28,84	JUL 27,84	*****	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	186.0	*****	4.92	G 6.39	0.0152	1.70	0.27
AUG 7,84	AUG 6,84	79.0	*****	*****	4.52	0.0526	4.05	0.62
AUG 8,84	AUG 7,84	464.0	15.4	*****	4.56	0.0484	1.85	0.08
AUG 11,84	AUG 10,84	847.0	19.0	*****	4.38	0.0534	1.80	0.20
AUG 12,84	AUG 11,84	1592.0	18.5	*****	4.39	0.0520	1.80	0.18
AUG 13,84	AUG 12,84	1680.0	19.3	*****	4.40	0.0562	1.80	0.18
AUG 14,84	AUG 13,84	465.0	13.5	*****	4.49	0.0436	0.80	0.21
AUG 15,84	AUG 14,84	1454.0	9.9	*****	4.64	0.0422	0.75	0.09
AUG 23,84	AUG 22,84	169.0	29.0	4.57	4.22	0.0776	2.75	0.40

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 6,84	JAN 5,84	0.20	0.17	0.010	<T 0.015	0.035	0.910	0.1259
JAN 22,84	JAN 21,84	*****	*****	*****	*****	*****	*****	*****
JAN 25,84	JAN 24,84	D 0.62	D 0.52	0.125	0.050	D 0.265	0.360	0.0525
JAN 26,84	JAN 25,84	*****	0.15	*****	*****	*****	0.090	0.0372
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	G 0.0002
FEB 4,84	FEB 3,84	0.14	0.19	0.015	0.020	0.080	0.450	0.0759
FEB 14,84	FEB 13,84	0.17	0.63	0.055	0.025	0.420	0.068	0.0275
FEB 15,84	FEB 14,84	0.04	0.34	0.015	<T 0.005	0.220	0.086	0.0214
FEB 18,84	FEB 17,84	0.13	0.09	0.015	<T 0.005	0.025	0.010	0.0437
FEB 20,84	FEB 19,84	0.26	0.16	0.035	0.020	0.050	0.082	0.0933
FEB 29,84	FEB 28,84	0.44	0.10	0.020	<W 0.005	0.025	0.062	0.0398
MAR 17,84	MAR 16,84	G 2.26	0.38	0.070	0.025	0.150	0.470	0.0324
MAR 23,84	MAR 22,84	0.38	0.30	0.040	<T 0.005	0.050	0.294	0.1072
APR 5,84	APR 4,84	0.10	0.06	D 0.015	<W 0.005	0.020	0.090	0.0098
APR 6,84	APR 5,84	0.03	0.04	<W 0.005	<W 0.005	<T 0.010	0.098	0.0224
APR 15,84	APR 14,84	0.07	0.03	0.050	<T 0.010	0.015	0.275	0.0209
APR 17,84	APR 16,84	0.04	<T 0.01	<W 0.005	<W 0.000	<W 0.005	0.095	0.0058
APR 24,84	APR 23,84	0.44	0.05	0.045	0.085	0.045	0.195	0.0072
APR 29,84	APR 28,84	0.33	0.08	0.030	0.025	0.040	0.155	0.0282
MAY 5,84	MAY 4,84	0.09	<W 0.01	0.010	<T 0.005	<T 0.005	0.115	0.0129
MAY 10,84	MAY 8,84	0.26	0.14	0.040	0.025	0.035	0.470	0.0708
MAY 23,84	MAY 22,84	0.32	0.06	0.025	0.025	0.030	0.145	0.0417
MAY 24,84	MAY 23,84	0.10	0.07	<W 0.005	<T 0.010	<T 0.010	0.120	0.0240
MAY 29,84	MAY 28,84	0.27	0.08	0.040	0.065	0.030	0.370	0.0089
JUN 19,84	JUN 18,84	0.37	0.12	0.025	0.035	0.070	0.295	0.0427
JUN 25,84	JUN 24,84	0.09	0.14	0.015	0.020	0.035	0.335	0.0813
JUN 26,84	JUN 25,84	0.66	0.10	0.025	0.055	<W 0.005	0.610	G 0.0011
JUN 27,84	JUN 26,84	0.23	0.14	0.030	0.035	<W 0.005	0.405	0.1122
JUL 18,84	JUL 17,84	0.37	0.13	0.055	0.025	0.015	0.270	0.0759
JUL 19,84	JUL 18,84	0.39	0.10	0.040	0.025	<T 0.010	0.245	0.0708
JUL 28,84	JUL 27,84	*****	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	*****	D 0.45	*****	*****	*****	0.130	G 0.0004
AUG 7,84	AUG 6,84	*****	0.15	*****	*****	*****	0.330	0.0302
AUG 8,84	AUG 7,84	0.11	0.06	0.005	<W 0.005	<T 0.010	0.250	0.0275
AUG 11,84	AUG 10,84	0.03	0.05	0.005	<W 0.005	<T 0.005	0.165	0.0417
AUG 12,84	AUG 11,84	0.05	0.09	0.005	0.040	0.050	0.160	0.0407
AUG 13,84	AUG 12,84	0.03	0.09	<W 0.005	<W 0.005	<W 0.005	0.160	0.0398
AUG 14,84	AUG 13,84	<T 0.01	0.12	<W 0.005	<W 0.005	<W 0.005	0.060	0.0324
AUG 15,84	AUG 14,84	<T 0.02	0.06	<W 0.005	<W 0.005	<T 0.010	0.040	0.0229
AUG 23,84	AUG 22,84	0.40	0.08	0.025	<T 0.010	<T 0.010	0.035	0.0603

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : RAILTON/DAILY/AEROCHEM

#10

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 24,84	AUG 23,84	800 800	2000 2230	1	1.3	1	91199	2	1	10	E N
AUG 30,84	AUG 29,84	800 800	1945 2200	1	8.5	1	91201	2	1	75	
AUG 31,84	AUG 30,84	800 800	1000 1400	1	1.7	1	91203	2	1	****	E
SEP 3,84	SEP 2,84	800 800	1100 200	1	16.4	1	91205	2	1	72	
SEP 10,84	SEP 9,84	800 800	430 800	1	6.4	1	91209	2	1	96	
SEP 11,84	SEP 10,84	800 800	**** ****	1	5.1	1	91211	2	1	87	
SEP 12,84	SEP 11,84	800 800	1000 1500	1	10.8	1	91213	2	1	100	M
SEP 14,84	SEP 13,84	800 800	930 1100	1	1.5	1	91217	2	1	67	
OCT 3,84	OCT 2,84	800 800	400 730	1	6.7	1	91219	2	1	82	
OCT 24,84	OCT 21,84	800 800	**** ****	1	8.4	1	91221	2	1	87	Z
OCT 26,84	OCT 25,84	800 800	2300 30	1	2.9	1	92083	2	1	95	
NOV 8,84	NOV 4,84	800 800	**** ****	1	****	*	91223	2	1	****	C Z
NOV 10,84	NOV 9,84	800 800	2200 800	1	33.1	1	91225	2	1	97	
NOV 11,84	NOV 10,84	800 800	800 1200	1	1.2	1	91229	2	1	45	N
NOV 16,84	NOV 15,84	800 800	1700 2100	1	2.2	1	91231	2	1	80	
NOV 17,84	NOV 16,84	800 800	2300 400	3	2.1	1	91234	2	1	74	
NOV 29,84	NOV 28,84	800 800	100 2000	1	12.8	1	91238	2	1	86	
DEC 4,84	DEC 3,84	800 800	830 1800	3	****	*	91240	2	1	****	
DEC 22,84	DEC 21,84	800 800	2000 700	1	30.1	2	91241	2	1	****	IKE
DEC 29,84	DEC 28,84	800 800	2200 400	1	7.5	2	91243	2	1	93	C



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : RAILTON/DAILY/AEROCHEM

#10

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 24,84	AUG 23,84	9.0	*****	*****	*****	*****	*****	*****
AUG 30,84	AUG 29,84	413.0	28.8	*****	4.26	0.2500	2.35	0.51
AUG 31,84	AUG 30,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	764.0	28.1	*****	4.30	0.0710	3.00	0.29
SEP 10,84	SEP 9,84	397.0	22.5	*****	4.38	0.0586	1.90	0.29
SEP 11,84	SEP 10,84	287.0	58.5	*****	3.97	0.1362	5.20	0.83
SEP 12,84	SEP 11,84	698.0	8.9	*****	4.81	0.0340	0.65	0.13
SEP 14,84	SEP 13,84	65.0	*****	*****	3.95	0.1424	4.80	0.70
OCT 3,84	OCT 2,84	353.0	31.0	*****	4.46	0.0614	3.80	0.86
OCT 24,84	OCT 21,84	469.0	56.5	*****	4.01	0.1300	5.60	0.76
OCT 26,84	OCT 25,84	178.0	23.6	4.39	4.42	0.0582	1.95	0.57
NOV 8,84	NOV 4,84	1574.0	31.3	*****	4.24	0.0774	2.50	0.56
NOV 10,84	NOV 9,84	2079.0	47.2	*****	4.05	0.1152	3.15	0.97
NOV 11,84	NOV 10,84	35.0	81.0	*****	3.79	0.1956	5.45	1.58
NOV 16,84	NOV 15,84	113.0	77.5	*****	3.86	0.1780	6.45	1.50
NOV 17,84	NOV 16,84	100.0	59.3	*****	4.04	0.1502	3.95	1.83
NOV 29,84	NOV 28,84	710.0	41.6	*****	4.10	0.1018	2.70	1.00
DEC 4,84	DEC 3,84	801.0	31.4	*****	4.29	0.0786	3.00	0.58
DEC 22,84	DEC 21,84	*****	*****	*****	*****	*****	*****	*****
DEC 29,84	DEC 28,84	450.0	22.3	*****	4.48	*****	2.25	0.35

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : RAILTON/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 24,84	AUG 23,84	*****	*****	*****	*****	*****	*****	*****
AUG 30,84	AUG 29,84	0.23	0.09	0.020	<T 0.005	<W 0.005	0.220	0.0550
AUG 31,84	AUG 30,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	0.17	0.06	0.020	<W 0.005	0.050	0.260	0.0501
SEP 10,84	SEP 9,84	0.08	0.34	0.040	<W 0.005	0.255	0.095	0.0417
SEP 11,84	SEP 10,84	0.23	0.35	0.055	0.015	0.230	0.490	0.1072
SEP 12,84	SEP 11,84	<W 0.01	0.05	<W 0.005	0.015	<T 0.005	0.040	0.0155
SEP 14,84	SEP 13,84	*****	0.27	*****	*****	*****	0.130	0.1122
OCT 3,84	OCT 2,84	1.16	0.21	0.140	0.095	0.070	0.630	0.0347
OCT 24,84	OCT 21,84	0.54	0.25	0.030	0.020	0.100	0.455	0.0977
OCT 26,84	OCT 25,84	0.36	0.08	0.020	0.015	0.035	0.255	0.0380
NOV 8,84	NOV 4,84	0.21	0.22	0.025	<W 0.005	0.115	0.275	0.0575
NOV 10,84	NOV 9,84	0.13	0.24	0.015	0.020	0.075	0.525	0.0891
NOV 11,84	NOV 10,84	*****	0.29	*****	*****	*****	0.835	0.1622
NOV 16,84	NOV 15,84	0.79	0.39	0.080	0.050	0.085	0.795	0.1380
NOV 17,84	NOV 16,84	0.72	0.26	0.070	0.050	0.050	1.050	0.0912
NOV 29,84	NOV 28,84	0.48	0.32	0.050	0.075	0.080	0.400	0.0794
DEC 4,84	DEC 3,84	0.06	0.11	0.020	<T 0.005	<W 0.005	0.760	0.0513
DEC 22,84	DEC 21,84	*****	*****	*****	*****	*****	*****	*****
DEC 29,84	DEC 28,84	0.18	0.19	0.020	<T 0.015	0.115	0.320	0.0331

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM

#12

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	700 700	300 700	2	22.0	2	22853	2	1	63	
JAN 3,84	JAN 2,84	700 700	700 1200	2	0.8	2	22854	2	1	****	GE
JAN 6,84	JAN 5,84	700 700	100 700	2	4.2	2	22855	2	1	62	
JAN 7,84	JAN 6,84	700 700	700 1810	3	2.2	2	22856	2	1	43	N
JAN 8,84	JAN 7,84	700 700	915 1055	2	0.6	2	22857	2	1	****	EF
JAN 9,84	JAN 8,84	700 700	1315 1400	2	1.0	2	22858	2	1	****	EF
JAN 10,84	JAN 9,84	700 700	400 600	2	4.6	2	22859	2	1	****	EF
JAN 14,84	JAN 13,84	700 700	1000 1900	2	6.4	2	22860	2	1	****	EF
JAN 15,84	JAN 14,84	700 700	800 1100	2	2.6	2	22861	2	1	****	EF
JAN 18,84	JAN 17,84	700 700	700 900	2	0.4	2	22862	2	1	****	EF
JAN 19,84	JAN 18,84	700 700	1700 2110	2	2.0	2	22863	2	1	****	EF
JAN 20,84	JAN 19,84	700 700	****	2	1.6	2	22864	2	1	****	EF
JAN 23,84	JAN 22,84	700 700	810 920	2	3.2	2	22865	2	1	****	EF
JAN 25,84	JAN 24,84	700 700	730 1720	3	6.2	2	22866	2	1	95	
JAN 27,84	JAN 26,84	700 700	15 100	2	3.0	2	22867	2	1	****	EF
JAN 28,84	JAN 27,84	700 700	730 1145	2	1.4	2	22868	2	1	****	EF
JAN 30,84	JAN 29,84	700 700	800 1600	2	2.8	2	22869	2	1	****	EF
JAN 31,84	JAN 30,84	700 700	700 1010	2	1.0	2	22870	2	1	****	EF
FEB 4,84	FEB 3,84	700 700	730 1930	3	3.6	2	22871	2	1	102	
FEB 6,84	FEB 5,84	700 700	700 1330	2	4.4	2	22872	2	1	****	EF
FEB 7,84	FEB 6,84	700 700	730 1215	2	1.0	2	22873	2	1	78	
FEB 12,84	FEB 11,84	700 700	810 1030	1	0.8	2	22874	2	1	54	
FEB 14,84	FEB 13,84	700 700	600 700	1	0.6	2	22875	2	1	143	N
FEB 15,84	FEB 14,84	700 700	1600 2230	1	13.4	2	22876	2	1	100	
FEB 18,84	FEB 17,84	700 700	1800 2010	1	6.6	2	22879	2	1	87	
FEB 19,84	FEB 18,84	700 700	1100 1130	1	0.4	2	22880	2	1	****	EF
FEB 21,84	FEB 20,84	700 700	700 745	1	0.1	2	22882	2	1	****	E
FEB 26,84	FEB 25,84	700 700	1600 1700	2	7.0	2	22884	2	1	****	E
FEB 28,84	FEB 27,84	700 700	430 730	2	4.6	2	22885	2	1	****	E
FEB 29,84	FEB 28,84	700 700	700 1600	2	36.0	2	22886	2	1	****	E
MAR 1,84	FEB 29,84	700 700	700 830	2	1.6	2	22887	2	1	****	E
MAR 4,84	MAR 3,84	700 700	1200 1400	2	2.2	2	22888	2	1	****	E
MAR 6,84	MAR 5,84	700 700	700 720	2	0.2	2	22889	2	1	****	E
MAR 10,84	MAR 9,84	700 700	530 615	2	2.0	2	22890	2	1	****	E
MAR 13,84	MAR 12,84	700 700	1600 2110	2	6.4	2	22891	2	1	****	E
MAR 16,84	MAR 15,84	700 700	500 630	2	2.8	2	22892	2	1	****	E
MAR 17,84	MAR 16,84	700 700	1500 1700	1	2.1	2	22893	2	1	****	E
MAR 20,84	MAR 19,84	700 700	1600 1700	1	1.1	2	22894	2	1	131	N
MAR 23,84	MAR 22,84	700 700	1700 2200	3	10.8	2	22895	2	1	79	
APR 5,84	APR 4,84	700 700	2145 2215	1	19.0	2	22896	2	1	115	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH0.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	889.0	10.8	*****	4.72	0.0350	1.15	0.12
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	167.0	65.0	*****	3.90	0.1656	5.25	1.14
JAN 7,84	JAN 6,84	61.0	*****	*****	3.82	0.2020	5.20	1.70
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 15,84	JAN 14,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	*****	*****	*****	*****	*****	*****	*****
JAN 19,84	JAN 18,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	*****	*****	*****	*****	*****	*****	*****
JAN 25,84	JAN 24,84	380.0	27.9	4.33	4.30	0.0840	1.95	0.45
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	*****
JAN 28,84	JAN 27,84	*****	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 3,84	237.0	59.5	3.99	3.95	0.1672	3.20	1.30
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 7,84	FEB 6,84	50.0	38.5	*****	4.10	0.1064	2.60	0.82
FEB 12,84	FEB 11,84	28.0	40.3	*****	4.14	0.1046	3.10	0.91
FEB 14,84	FEB 13,84	55.0	17.3	*****	4.63	0.0458	1.40	0.28
FEB 15,84	FEB 14,84	867.0	14.0	*****	4.68	0.0416	0.80	0.23
FEB 18,84	FEB 17,84	371.0	17.8	*****	4.64	0.0482	1.55	0.47
FEB 19,84	FEB 18,84	*****	*****	*****	*****	*****	*****	*****
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 26,84	FEB 25,84	*****	*****	*****	*****	*****	*****	*****
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 1,84	FEB 29,84	*****	*****	*****	*****	*****	*****	*****
MAR 4,84	MAR 3,84	*****	*****	*****	*****	*****	*****	*****
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 10,84	MAR 9,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	*****	*****	*****	*****	*****	*****	*****
MAR 17,84	MAR 16,84	*****	*****	*****	*****	*****	*****	*****
MAR 20,84	MAR 19,84	93.0	> 100.0	*****	3.78	0.2680	10.80	2.05
MAR 23,84	MAR 22,84	547.0	28.6	*****	4.29	0.0798	2.65	0.50
APR 5,84	APR 4,84	1405.0	12.0	*****	4.72	0.0380	1.20	0.13

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEN

#12

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	0.06	0.04	0.025	<T 0.010	0.145	0.022	0.0191
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	0.16	0.20	0.025	0.025	0.135	0.660	0.1259
JAN 7,84	JAN 6,84	*****	0.23	*****	*****	*****	*****	0.1514
JAN 8,84	JAN 7,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 14,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 15,84	JAN 14,84	*****	*****	*****	*****	*****	*****	*****
JAN 18,84	JAN 17,84	*****	*****	*****	*****	*****	*****	*****
JAN 19,84	JAN 18,84	*****	*****	*****	*****	*****	*****	*****
JAN 20,84	JAN 19,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	*****	*****	*****	*****	*****	*****	*****
JAN 25,84	JAN 24,84	0.03	0.10	0.005	<W 0.005	0.045	0.190	0.0501
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	*****
JAN 28,84	JAN 27,84	*****	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
JAN 31,84	JAN 30,84	*****	*****	*****	*****	*****	*****	*****
FEB 4,84	FEB 3,84	0.24	D 0.70	0.020	0.025	0.280	0.350	0.1122
FEB 6,84	FEB 5,84	*****	*****	*****	*****	*****	*****	*****
FEB 7,84	FEB 6,84	*****	0.31	*****	*****	*****	0.380	0.0794
FEB 12,84	FEB 11,84	*****	0.47	*****	*****	*****	*****	0.0724
FEB 14,84	FEB 13,84	*****	0.79	*****	*****	*****	0.010	0.0234
FEB 15,84	FEB 14,84	0.03	0.60	0.040	<T 0.005	0.355	0.062	0.0209
FEB 18,84	FEB 17,84	0.15	0.12	0.010	<T 0.015	0.065	0.460	0.0229
FEB 19,84	FEB 18,84	*****	*****	*****	*****	*****	*****	*****
FEB 21,84	FEB 20,84	*****	*****	*****	*****	*****	*****	*****
FEB 26,84	FEB 25,84	*****	*****	*****	*****	*****	*****	*****
FEB 28,84	FEB 27,84	*****	*****	*****	*****	*****	*****	*****
FEB 29,84	FEB 28,84	*****	*****	*****	*****	*****	*****	*****
MAR 1,84	FEB 29,84	*****	*****	*****	*****	*****	*****	*****
MAR 4,84	MAR 3,84	*****	*****	*****	*****	*****	*****	*****
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 10,84	MAR 9,84	*****	*****	*****	*****	*****	*****	*****
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 16,84	MAR 15,84	*****	*****	*****	*****	*****	*****	*****
MAR 17,84	MAR 16,84	*****	*****	*****	*****	*****	*****	*****
MAR 20,84	MAR 19,84	G 2.10	0.70	G 0.130	0.050	0.315	1.210	0.1660
MAR 23,84	MAR 22,84	0.15	0.18	0.035	<T 0.005	0.065	0.348	0.0513
APR 5,84	APR 4,84	0.07	0.08	0.005	<T 0.010	0.030	0.116	0.0191

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
APR 6,84	APR 5,84	700 700	115 130	1	27.0	2	22899	2	1	90	
APR 13,84	APR 12,84	700 700	2215 2245	1	4.0	2	29902	2	1	134	NJHCM
APR 14,84	APR 13,84	700 700	2300 2330	1	3.6	2	29903	2	1	137	NJHCM
APR 15,84	APR 14,84	700 700	700 715	1	10.0	2	22904	2	1	85	
APR 17,84	APR 16,84	700 700	1300 1400	1	20.0	2	22905	2	1	30	NC
APR 18,84	APR 17,84	700 700	1800 1835	1	8.8	2	22908	2	1	89	HCM
APR 24,84	APR 23,84	700 700	1640 1700	1	12.0	1	22909	2	1	69	JC
MAY 20,84	MAY 19,84	930 728	1530 1533	1	11.6	1	22911	2	1	18	CDG
MAY 23,84	MAY 22,84	835 835	530 600	1	18.0	1	22912	2	1	19	DG H
MAY 24,84	MAY 23,84	835 815	1800 730	1	24.2	1	22913	2	1	92	
MAY 31,84	MAY 30,84	728 845	830 800	1	20.2	1	22914	2	1	94	B
JUN 1,84	MAY 31,84	845 735	****	1	1.6	1	22915	2	1	34	N
JUN 6,84	JUN 5,84	735 805	1830 630	1	2.0	1	22916	2	1	74	
JUN 7,84	JUN 6,84	805 740	1500 1515	1	0.2	1	22917	2	1	23	E N
JUN 10,84	JUN 9,84	746 1115	400 1615	1	1.8	1	22918	2	1	94	
JUN 18,84	JUN 17,84	735 955	1915 2130	1	7.4	1	22919	2	1	98	C
JUN 19,84	JUN 18,84	955 725	1000 1100	1	0.2	1	22920	2	1	62	E
JUN 24,84	JUN 23,84	750 1425	830 930	1	7.8	1	22921	2	1	87	
JUN 25,84	JUN 24,84	1425 745	830 930	1	17.8	1	22922	2	1	36	N
JUN 26,84	JUN 25,84	745 820	1830 1900	1	1.4	1	22923	2	1	84	
JUN 28,84	JUN 27,84	800 800	1740 1825	1	5.0	1	22924	2	1	95	C
JUL 5,84	JUL 4,84	800 735	1000 1030	1	1.8	1	22925	2	1	81	D
JUL 7,84	JUL 6,84	800 800	1915 1930	1	0.6	1	22926	2	1	41	N
JUL 8,84	JUL 7,84	805 740	1815 1845	1	1.6	1	22927	2	1	74	C
JUL 11,84	JUL 10,84	800 1030	745 1000	1	16.8	1	22928	2	1	108	
JUL 12,84	JUL 11,84	1030 800	1200 1300	1	11.4	1	22929	2	1	104	
JUL 15,84	JUL 14,84	800 1015	1530 1535	1	1.4	1	22930	2	1	100	H
JUL 17,84	JUL 16,84	830 1530	2215 2330	1	7.4	1	22931	2	1	112	
JUL 18,84	JUL 17,84	1530 830	230 400	1	8.0	1	22932	2	1	109	
JUL 19,84	JUL 18,84	935 820	1230 1345	1	6.2	1	22933	2	1	101	
JUL 27,84	JUL 26,84	830 1010	630 ****	1	1.0	*	22934	2	1	81	
JUL 28,84	JUL 27,84	1010 830	315 400	1	5.1	1	22935	2	1	108	
JUL 31,84	JUL 30,84	745 735	330 345	1	0.4	1	22936	2	1	89	
AUG 1,84	JUL 31,84	735 745	600 645	1	0.2	1	22937	2	1	124	N
AUG 2,84	AUG 1,84	745 840	1015 1300	1	4.8	1	22938	2	1	102	
AUG 4,84	AUG 3,84	840 745	1830 1915	1	2.1	1	22939	2	1	83	H
AUG 7,84	AUG 6,84	745 835	1815 1850	1	1.6	1	22940	2	1	73	
AUG 10,84	AUG 9,84	750 830	1015 1100	1	2.6	1	22942	2	1	101	
AUG 11,84	AUG 10,84	830 900	450 515	1	0.6	1	22943	2	1	****	E
AUG 12,84	AUG 11,84	900 1030	2200 2245	1	9.4	1	22944	2	1	80	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
APR 6,84	APR 5,84	1571.0	7.6	*****	4.89	0.0300	0.60	0.14
APR 13,84	APR 12,84	344.0	5.7	5.10	G 5.65	0.0248	0.60	0.05
APR 14,84	APR 13,84	317.0	5.0	5.06	B 5.57	0.0248	0.55	0.03
APR 15,84	APR 14,84	550.0	32.6	4.23	4.26	0.0862	2.60	0.66
APR 17,84	APR 16,84	393.0	6.3	4.96	D 5.25	0.0280	D 0.55	0.08
APR 18,84	APR 17,84	505.0	25.0	4.29	4.32	0.0748	1.90	2.80
APR 24,84	APR 23,84	532.0	6.0	G 5.31	G 5.85	0.0258	0.65	0.15
MAY 20,84	MAY 19,84	134.0	77.7	*****	4.27	0.1090	9.40	G 2.90
MAY 23,84	MAY 22,84	220.0	100.0	B 5.48	B 5.70	0.0718	D 15.80	0.41
MAY 24,84	MAY 23,84	1428.0	10.2	4.80	4.72	0.0376	1.05	0.06
MAY 31,84	MAY 30,84	1219.0	17.7	4.53	4.48	0.0550	1.70	0.21
JUN 1,84	MAY 31,84	35.0	*****	*****	3.90	0.1656	G 69.50	0.83
JUN 6,84	JUN 5,84	95.0	*****	*****	3.63	0.2960	14.00	1.56
JUN 7,84	JUN 6,84	3.0	*****	*****	*****	*****	*****	*****
JUN 10,84	JUN 9,84	109.0	39.4	*****	4.13	0.1024	5.35	0.81
JUN 18,84	JUN 17,84	468.0	10.6	4.98	5.07	0.0254	0.70	0.09
JUN 19,84	JUN 18,84	8.0	*****	*****	*****	*****	*****	*****
JUN 24,84	JUN 23,84	438.0	47.0	*****	4.01	0.1226	5.50	0.51
JUN 25,84	JUN 24,84	420.0	29.7	*****	4.19	0.0880	3.55	0.30
JUN 26,84	JUN 25,84	76.0	*****	*****	4.67	0.0500	2.80	0.89
JUN 28,84	JUN 27,84	306.0	74.4	3.81	3.87	0.1756	7.05	1.08
JUL 5,84	JUL 4,84	94.0	*****	*****	3.89	0.1724	7.90	1.38
JUL 7,84	JUL 6,84	16.0	*****	*****	3.86	0.1874	*****	*****
JUL 8,84	JUL 7,84	76.0	*****	*****	G 6.72	0.0150	0.55	0.30
JUL 11,84	JUL 10,84	1172.0	36.4	4.04	4.18	0.0950	3.60	0.43
JUL 12,84	JUL 11,84	764.0	30.6	4.19	4.19	0.0884	3.35	0.38
JUL 15,84	JUL 14,84	90.0	*****	*****	G 6.14	0.0230	3.45	0.74
JUL 17,84	JUL 16,84	532.0	> 100.0	3.66	3.64	0.2520	10.15	1.10
JUL 18,84	JUL 17,84	561.0	68.8	3.86	3.84	0.1676	6.30	0.89
JUL 19,84	JUL 18,84	403.0	36.6	4.12	4.10	0.0950	3.25	0.50
JUL 27,84	JUL 26,84	52.0	*****	*****	G 5.92	0.0270	5.00	1.36
JUL 28,84	JUL 27,84	356.0	10.0	G 5.84	G 6.15	0.0186	1.70	0.31
JUL 31,84	JUL 30,84	23.0	*****	*****	4.84	0.1108	*****	*****
AUG 1,84	JUL 31,84	16.0	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	314.0	23.5	4.26	4.33	0.0636	2.55	0.27
AUG 4,84	AUG 3,84	113.0	22.8	*****	G 5.23	0.0296	4.20	0.58
AUG 7,84	AUG 6,84	75.0	*****	*****	4.08	0.1188	9.70	1.33
AUG 10,84	AUG 9,84	170.0	*****	*****	3.70	0.2140	*****	*****
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 12,84	AUG 11,84	486.0	43.6	*****	4.06	0.1034	4.30	0.58



ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
APR 6,84	APR 5,84	0.03	0.05	0.005	<W 0.005	0.015	0.102	0.0129
APR 13,84	APR 12,84	0.03	<T 0.01	<W 0.005	<T 0.005	<T 0.005	0.108	G 0.0022
APR 14,84	APR 13,84	0.03	<W 0.01	<W 0.005	<W 0.005	<T 0.005	0.108	B 0.0027
APR 15,84	APR 14,84	0.14	0.10	0.040	D 0.025	0.055	0.470	0.0550
APR 17,84	APR 16,84	0.02	<T 0.01	<W 0.005	<W 0.005	<T 0.005	0.116	D 0.0056
APR 18,84	APR 17,84	0.05	0.04	0.010	<T 0.005	<T 0.005	0.082	0.0479
APR 24,84	APR 23,84	0.06	<W 0.01	0.010	<T 0.015	0.040	0.265	G 0.0014
MAY 20,84	MAY 19,84	G 1.77	0.41	0.285	G 0.430	0.125	G 3.000	0.0537
MAY 23,84	MAY 22,84	B 5.80	B 13.50	B 0.450	B 0.720	B 12.900	<W 0.005	B 0.0020
MAY 24,84	MAY 23,84	<T 0.02	0.06	D 0.010	<T 0.015	0.025	0.050	0.0191
MAY 31,84	MAY 30,84	0.19	0.09	0.030	<T 0.015	0.020	0.090	0.0331
JUN 1,84	MAY 31,84	*****	0.51	*****	*****	*****	*****	0.1259
JUN 6,84	JUN 5,84	0.95	0.54	0.320	0.170	0.205	1.100	0.2344
JUN 7,84	JUN 6,84	*****	*****	*****	*****	*****	*****	*****
JUN 10,84	JUN 9,84	0.78	0.26	0.155	0.100	0.095	0.745	0.0741
JUN 18,84	JUN 17,84	0.10	0.03	0.025	<T 0.010	0.015	0.070	0.0085
JUN 19,84	JUN 18,84	*****	*****	*****	*****	*****	*****	*****
JUN 24,84	JUN 23,84	0.42	0.24	0.060	0.055	0.130	0.505	0.0977
JUN 25,84	JUN 24,84	0.08	0.08	0.010	<T 0.010	<T 0.010	0.400	0.0646
JUN 26,84	JUN 25,84	*****	0.15	*****	*****	*****	0.555	0.0214
JUN 28,84	JUN 27,84	0.58	0.27	0.105	0.065	0.020	0.530	0.1349
JUL 5,84	JUL 4,84	1.27	0.29	0.305	0.070	0.060	0.515	0.1288
JUL 7,84	JUL 6,84	*****	*****	*****	*****	*****	*****	0.1380
JUL 8,84	JUL 7,84	*****	0.14	*****	*****	*****	0.440	G 0.0002
JUL 11,84	JUL 10,84	0.10	0.11	0.010	<T 0.010	<T 0.005	0.320	0.0661
JUL 12,84	JUL 11,84	0.16	0.08	0.015	0.020	<T 0.010	0.350	0.0646
JUL 15,84	JUL 14,84	G 1.86	0.16	0.305	0.125	0.075	0.525	G 0.0007
JUL 17,84	JUL 16,84	0.50	0.20	0.105	0.045	0.025	0.590	0.2291
JUL 18,84	JUL 17,84	0.46	0.20	0.090	0.020	0.030	0.375	0.1445
JUL 19,84	JUL 18,84	0.16	0.09	0.020	0.040	0.020	0.235	0.0794
JUL 27,84	JUL 26,84	*****	0.49	*****	*****	*****	1.250	G 0.0012
JUL 28,84	JUL 27,84	0.44	0.07	0.180	0.035	0.040	0.460	G 0.0007
JUL 31,84	JUL 30,84	*****	*****	*****	*****	*****	*****	0.0145
AUG 1,84	JUL 31,84	*****	*****	*****	*****	*****	*****	*****
AUG 2,84	AUG 1,84	0.18	0.10	0.040	0.050	0.025	0.195	0.0468
AUG 4,84	AUG 3,84	1.33	0.24	0.230	0.145	0.075	0.660	G 0.0059
AUG 7,84	AUG 6,84	*****	G 0.83	*****	*****	*****	0.775	0.0832
AUG 10,84	AUG 9,84	0.33	*****	0.075	0.040	0.035	0.700	0.1995
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 12,84	AUG 11,84	0.18	0.12	0.050	0.050	0.035	0.460	0.0871

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 13,84	AUG 12,84	1030 820	2200 400	1	28.2	1	22945	2	1	108	
AUG 14,84	AUG 13,84	820 830	1015 1030	1	6.6	1	22946	2	1	98	
AUG 15,84	AUG 14,84	830 740	1030 1200	1	9.2	1	22947	2	1	103	A
AUG 23,84	AUG 21,84	740 815	1845 ****	1	16.6	1	22948	2	1	99	JZ
AUG 24,84	AUG 23,84	830 715	1500 1930	1	1.6	1	22949	2	1	76	
AUG 29,84	AUG 28,84	745 850	2330 100	1	10.2	1	22950	2	1	100	
AUG 30,84	AUG 29,84	850 820	1900 1930	1	1.2	1	22951	2	1	****	C
AUG 31,84	AUG 30,84	820 830	1145 1215	1	2.6	1	22952	2	1	92	
SEP 3,84	SEP 2,84	815 850	2015 800	1	9.4	1	22953	2	1	101	D
SEP 6,84	SEP 5,84	815 250	1430 1500	1	1.1	1	22954	2	1	****	E
SEP 10,84	SEP 9,84	815 1100	615 1030	1	4.1	1	22955	2	1	104	
SEP 11,84	SEP 10,84	1100 845	1145 1400	1	5.8	1	22956	2	1	****	EG
SEP 12,84	SEP 11,84	845 900	1130 1600	1	14.0	1	22957	2	1	98	
SEP 13,84	SEP 12,84	900 845	400 415	1	0.6	1	22958	2	1	****	E
SEP 14,84	SEP 13,84	845 835	930 1100	1	1.0	1	22959	2	1	****	E
SEP 16,84	SEP 15,84	835 1030	1030 1100	1	0.4	1	22960	2	1	****	E
SEP 17,84	SEP 16,84	1030 845	1900 1930	1	0.8	1	22961	2	1	****	E
SEP 30,84	SEP 29,84	830 1145	415 430	1	3.0	1	22962	2	1	85	AC
OCT 3,84	OCT 1,84	830 940	**** ****	1	6.8	1	22963	2	1	98	CD Z
OCT 4,84	OCT 3,84	940 850	500 1100	1	7.8	1	22964	2	1	72	U G
OCT 8,84	OCT 6,84	830 1330	600 1215	1	1.2	1	22965	2	1	74	Z
OCT 9,84	OCT 8,84	1330 830	1530 1600	1	0.8	1	22966	2	1	60	
OCT 20,84	OCT 19,84	1500 800	1500 1800	1	4.0	1	22967	2	1	25	D N
OCT 21,84	OCT 20,84	800 1120	900 1100	1	2.6	1	22968	2	1	84	
OCT 22,84	OCT 21,84	1120 1630	1200 1000	1	6.0	1	22969	2	1	93	
OCT 28,84	OCT 22,84	1630 1120	**** ****	1	4.1	1	22970	2	1	78	Z
DEC 3,84	NOV 30,84	900 1500	900 1500	3	26.8	2	22979	2	1	****	Z
DEC 6,84	DEC 3,84	1500 800	**** ****	2	10.6	2	22980	2	1	104	C Z
DEC 7,84	DEC 6,84	800 1300	**** ****	2	1.6	2	22981	2	1	29	N
DEC 16,84	DEC 7,84	1300 800	**** ****	2	13.6	2	22982	2	1	13	C NZ
DEC 20,84	DEC 19,84	1700 1200	**** ****	2	5.7	2	22983	2	1	62	C
DEC 24,84	DEC 23,84	1100 800	**** ****	2	16.0	2	22984	2	1	28	N
DEC 25,84	DEC 24,84	800 700	**** ****	2	9.8	2	22985	2	1	40	N
DEC 29,84	DEC 28,84	1200 800	**** ****	3	9.2	2	22986	2	1	53	
DEC 30,84	DEC 29,84	800 800	**** ****	3	6.0	2	22987	2	1	46	N

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM #12

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 13,84	AUG 12,84	1954.0	11.4	*****	4.64	0.0402	0.90	0.13
AUG 14,84	AUG 13,84	415.0	28.1	*****	4.22	0.0800	2.40	0.36
AUG 15,84	AUG 14,84	609.0	29.0	*****	4.15	0.0840	2.15	0.39
AUG 23,84	AUG 21,84	1060.0	48.9	4.52	3.99	0.1230	4.60	0.42
AUG 24,84	AUG 23,84	78.0	*****	*****	4.16	0.0932	4.45	0.10
AUG 29,84	AUG 28,84	659.0	> 100.0	*****	3.66	0.2680	11.20	1.10
AUG 30,84	AUG 29,84	*****	*****	*****	*****	*****	*****	*****
AUG 31,84	AUG 30,84	154.0	89.5	*****	3.77	0.2100	8.25	1.42
SEP 3,84	SEP 2,84	612.0	13.9	*****	4.78	0.2900	2.15	0.16
SEP 6,84	SEP 5,84	*****	*****	*****	*****	*****	*****	*****
SEP 10,84	SEP 9,84	274.0	37.3	*****	4.17	0.0922	3.40	0.44
SEP 11,84	SEP 10,84	*****	*****	*****	*****	*****	*****	*****
SEP 12,84	SEP 11,84	882.0	5.7	*****	4.83	0.0274	0.40	0.10
SEP 13,84	SEP 12,84	*****	*****	*****	*****	*****	*****	*****
SEP 14,84	SEP 13,84	*****	*****	*****	*****	*****	*****	*****
SEP 16,84	SEP 15,84	*****	*****	*****	*****	*****	*****	*****
SEP 17,84	SEP 16,84	*****	*****	*****	*****	*****	*****	*****
SEP 30,84	SEP 29,84	164.0	47.0	*****	4.06	0.1172	5.65	1.27
OCT 3,84	OCT 1,84	430.0	37.1	*****	4.30	0.0782	3.30	1.17
OCT 4,84	OCT 3,84	364.0	31.3	*****	4.94	0.0406	5.30	1.03
OCT 8,84	OCT 6,84	57.0	*****	*****	3.53	G 0.3560	12.50	2.51
OCT 9,84	OCT 8,84	31.0	*****	*****	3.21	G 0.7760	> 10.00	> 2.00
OCT 20,84	OCT 19,84	65.0	64.4	*****	3.99	0.1396	7.05	1.19
OCT 21,84	OCT 20,84	141.0	94.3	*****	3.75	0.2240	8.85	1.43
OCT 22,84	OCT 21,84	361.0	34.0	4.21	4.20	0.0858	3.30	0.38
OCT 28,84	OCT 22,84	205.0	35.1	4.21	4.22	0.0850	3.05	0.68
DEC 3,84	NOV 30,84	*****	38.0	*****	4.10	0.0992	2.05	0.86
DEC 6,84	DEC 3,84	710.0	6.3	*****	5.32	0.0242	0.30	0.23
DEC 7,84	DEC 6,84	30.0	*****	*****	G 6.29	0.0168	*****	*****
DEC 16,84	DEC 7,84	116.0	87.0	*****	3.82	0.2122	7.05	1.97
DEC 20,84	DEC 19,84	230.0	11.3	*****	5.01	0.0322	1.10	0.30
DEC 24,84	DEC 23,84	288.0	30.5	*****	4.23	0.0840	1.50	0.69
DEC 25,84	DEC 24,84	255.0	35.4	*****	4.18	0.0916	1.70	0.93
DEC 29,84	DEC 28,84	317.0	23.5	*****	4.46	0.0574	2.35	0.42
DEC 30,84	DEC 29,84	177.0	23.1	*****	4.46	0.1570	2.40	0.42

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GRAHAM LAKE/DAILY/AEROCHEM

#12

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 13,84	AUG 12,84	<T 0.02	0.08	0.005	<W 0.005	<W 0.005	0.100	0.0229
AUG 14,84	AUG 13,84	0.06	0.16	0.015	0.020	0.060	0.195	0.0603
AUG 15,84	AUG 14,84	0.05	0.10	0.005	<W 0.005	<W 0.005	0.115	0.0708
AUG 23,84	AUG 21,84	0.08	0.07	0.005	<W 0.005	<T 0.005	0.200	0.1023
AUG 24,84	AUG 23,84	0.18	0.07	0.045	0.015	0.025	0.200	0.0692
AUG 29,84	AUG 28,84	0.36	0.32	0.075	0.060	0.035	0.775	0.2188
AUG 30,84	AUG 29,84	*****	*****	*****	*****	*****	*****	*****
AUG 31,84	AUG 30,84	0.75	0.33	0.155	0.120	0.215	0.540	0.1698
SEP 3,84	SEP 2,84	0.27	0.14	0.060	0.035	0.045	0.200	0.0166
SEP 6,84	SEP 5,84	*****	*****	*****	*****	*****	*****	*****
SEP 10,84	SEP 9,84	0.17	0.63	0.075	0.060	G 0.415	0.130	0.0676
SEP 11,84	SEP 10,84	*****	*****	*****	*****	*****	*****	*****
SEP 12,84	SEP 11,84	0.03	0.05	0.005	<T 0.005	<T 0.005	0.020	0.0148
SEP 13,84	SEP 12,84	*****	*****	*****	*****	*****	*****	*****
SEP 14,84	SEP 13,84	*****	*****	*****	*****	*****	*****	*****
SEP 16,84	SEP 15,84	*****	*****	*****	*****	*****	*****	*****
SEP 17,84	SEP 16,84	*****	*****	*****	*****	*****	*****	*****
SEP 30,84	SEP 29,84	0.82	0.24	0.205	0.120	0.065	0.815	0.0871
OCT 3,84	OCT 1,84	0.61	0.23	0.140	0.080	0.030	0.790	0.0501
OCT 4,84	OCT 3,84	1.35	0.20	0.230	0.125	0.050	1.200	0.0115
OCT 8,84	OCT 6,84	*****	0.51	*****	*****	*****	0.585	0.2951
OCT 9,84	OCT 8,84	*****	G 1.25	*****	*****	*****	*****	0.6166
OCT 20,84	OCT 19,84	0.80	0.41	0.170	0.085	0.175	0.890	0.1023
OCT 21,84	OCT 20,84	0.33	0.46	0.070	0.100	0.235	0.865	0.1778
OCT 22,84	OCT 21,84	<T 0.01	0.14	0.005	0.080	0.135	0.330	0.0631
OCT 28,84	OCT 22,84	0.19	0.22	0.030	0.105	0.100	0.360	0.0603
DEC 3,84	NOV 30,84	0.08	0.18	0.020	<T 0.005	<T 0.010	0.405	0.0794
DEC 6,84	DEC 3,84	0.24	0.10	0.020	0.060	0.065	0.055	0.0048
DEC 7,84	DEC 6,84	*****	*****	*****	*****	*****	*****	G 0.0005
DEC 16,84	DEC 7,84	0.44	0.47	0.090	0.165	0.275	1.250	0.1514
DEC 20,84	DEC 19,84	0.21	0.15	0.030	0.060	0.100	0.220	0.0098
DEC 24,84	DEC 23,84	0.10	0.07	<T 0.010	<T 0.020	0.030	0.095	0.0589
DEC 25,84	DEC 24,84	0.14	0.15	0.025	<T 0.020	0.030	0.305	0.0661
DEC 29,84	DEC 28,84	0.14	0.17	0.020	0.060	0.110	0.425	0.0347
DEC 30,84	DEC 29,84	0.16	0.16	0.025	0.040	0.115	0.420	0.0347

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 2,84	JAN 1,84	800 800	200 730	2	10.0	2	22271	2	1	****	EF
JAN 5,84	JAN 4,84	800 800	1900 300	2	3.0	2	22272	2	1	****	EF
JAN 6,84	JAN 5,84	800 800	2200 800	2	4.8	2	22273	2	1	****	EF
JAN 10,84	JAN 9,84	800 800	900 1500	2	2.8	2	22274	2	1	****	EF
JAN 13,84	JAN 12,84	800 800	930 1800	2	3.0	2	22275	2	1	****	EF
JAN 15,84	JAN 14,84	800 800	100 800	2	3.8	2	22276	2	1	20	N
JAN 25,84	JAN 24,84	800 800	530 1600	3	2.4	2	22277	2	1	****	EF
JAN 30,84	JAN 29,84	800 800	300 1600	2	5.8	2	22278	2	1	****	EF
FEB 15,84	FEB 14,84	800 800	1930 2100	1	25.2	2	22280	2	1	****	E
FEB 20,84	FEB 19,84	800 800	830 1400	1	3.8	2	22281	2	1	****	E
FEB 26,84	FEB 25,84	800 800	930 1800	2	3.6	2	22279	2	1	92	
MAR 6,84	MAR 5,84	800 800	830 ****	2	5.2	2	22282	2	1	****	E
MAR 22,84	MAR 21,84	800 800	845 1400	3	9.8	2	22283	2	1	38	C N
APR 5,84	APR 4,84	800 800	2000 800	1	14.8	2	22284	2	1	66	C
APR 6,84	APR 5,84	800 800	800 800	1	19.2	2	22285	2	1	92	C
APR 7,84	APR 6,84	800 800	800 1130	1	1.2	2	22286	2	1	143	C N
APR 14,84	APR 13,84	800 800	1700 800	1	3.8	1	22288	2	1	93	C
APR 15,84	APR 14,84	800 800	230 800	1	16.8	1	22289	2	1	95	C
APR 16,84	APR 15,84	800 800	800 800	1	4.2	1	22290	2	1	71	
APR 17,84	APR 16,84	800 800	800 400	1	16.4	1	22291	2	1	39	NJTHCM
APR 18,84	APR 17,84	800 800	2200 300	1	1.2	1	22292	2	1	33	AC N
APR 24,84	APR 23,84	800 800	900 800	1	6.2	1	22293	2	1	99	C
APR 25,84	APR 24,84	800 800	800 800	1	13.8	1	22294	2	1	95	AC
APR 30,84	APR 29,84	800 800	200 2400	1	4.8	1	22296	2	1	98	AC
MAY 5,84	MAY 4,84	800 800	830 2000	1	12.0	1	22297	2	1	106	AC
MAY 9,84	MAY 8,84	800 800	830 2000	1	16.8	1	22299	2	1	95	AC
MAY 12,84	MAY 11,84	800 800	1030 800	1	11.8	1	22300	2	1	96	C
MAY 13,84	MAY 12,84	800 800	1330 1400	3	1.0	1	22301	2	1	28	C N
MAY 23,84	MAY 22,84	800 800	300 800	1	16.2	1	22303	2	1	41	C N
MAY 24,84	MAY 23,84	800 800	800 1400	1	7.8	1	22304	2	1	86	C
MAY 26,84	MAY 25,84	800 800	300 345	1	1.0	1	22307	2	1	17	N
MAY 29,84	MAY 28,84	800 800	830 800	1	21.4	1	22308	2	1	103	C
JUN 10,84	JUN 9,84	800 800	230 330	1	2.8	1	22309	2	1	70	C
JUN 18,84	JUN 17,84	800 800	300 800	1	14.6	1	22310	2	1	89	C
JUN 19,84	JUN 18,84	800 800	800 1830	1	8.4	1	22311	2	1	92	CD
JUN 24,84	JUN 23,84	800 800	300 800	1	10.8	1	22312	2	1	****	GE
JUN 25,84	JUN 24,84	800 800	800 1800	1	26.0	1	22313	2	1	26	C N
JUN 28,84	JUN 27,84	800 800	**** ****	1	17.6	1	22316	2	1	****	ABGE
JUL 5,84	JUL 4,84	800 800	1000 1730	1	8.0	1	22317	2	1	101	
JUL 6,84	JUL 5,84	800 800	2300 200	1	8.2	1	22318	2	1	100	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 2,84	JAN 1,84	*****	*****	*****	*****	*****	*****	*****
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	*****	*****	*****	*****	*****	*****	*****
JAN 15,84	JAN 14,84	50.0	*****	*****	3.98	0.1768	8.20	> 2.00
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 15,84	FEB 14,84	*****	*****	*****	*****	*****	*****	*****
FEB 20,84	FEB 19,84	*****	*****	*****	*****	*****	*****	*****
FEB 26,84	FEB 25,84	214.0	42.3	*****	4.16	0.0974	2.45	1.45
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 22,84	MAR 21,84	241.0	38.5	*****	4.24	0.0964	3.55	0.69
APR 5,84	APR 4,84	633.0	10.4	*****	4.71	D 0.0998	1.05	0.19
APR 6,84	APR 5,84	1135.0	14.6	*****	4.58	0.0468	0.95	0.35
APR 7,84	APR 6,84	110.0	23.4	*****	4.33	0.0662	1.90	0.37
APR 14,84	APR 13,84	227.0	46.5	4.08	4.12	0.1004	3.80	0.96
APR 15,84	APR 14,84	1031.0	9.5	4.78	5.09	0.0300	0.85	0.12
APR 16,84	APR 15,84	192.0	12.5	4.61	4.86	0.0354	1.25	0.18
APR 17,84	APR 16,84	420.0	5.7	4.97	0.55	0.0218	0.05	0.01
APR 18,84	APR 17,84	26.0	*****	*****	3.50	B 0.3480	*****	*****
APR 24,84	APR 23,84	396.0	20.0	4.52	4.50	D 0.0600	1.80	0.37
APR 25,84	APR 24,84	844.0	9.5	4.87	4.74	0.0452	0.75	0.20
APR 30,84	APR 29,84	303.0	49.8	4.18	4.16	0.1178	6.20	0.92
MAY 5,84	MAY 4,84	819.0	17.2	4.55	4.62	0.0526	1.95	0.25
MAY 9,84	MAY 8,84	1026.0	38.9	4.16	4.20	0.0994	3.95	0.51
MAY 12,84	MAY 11,84	732.0	49.0	4.06	4.12	0.1156	5.00	0.72
MAY 13,84	MAY 12,84	18.0	*****	*****	G 7.27	0.0266	*****	*****
MAY 23,84	MAY 22,84	434.0	22.1	4.37	4.41	0.0604	1.90	0.25
MAY 24,84	MAY 23,84	433.0	8.8	4.93	D 5.09	0.0282	0.75	0.07
MAY 26,84	MAY 25,84	11.0	*****	*****	3.69	0.2500	*****	*****
MAY 29,84	MAY 28,84	1426.0	15.0	4.52	4.56	0.0470	1.45	0.11
JUN 10,84	JUN 9,84	127.0	49.2	*****	4.13	0.1110	7.20	0.98
JUN 18,84	JUN 17,84	834.0	16.6	4.51	4.66	0.0408	1.55	0.16
JUN 19,84	JUN 18,84	498.0	24.5	4.25	4.33	0.0740	2.30	0.41
JUN 24,84	JUN 23,84	*****	*****	*****	*****	*****	*****	*****
JUN 25,84	JUN 24,84	434.0	45.9	*****	3.99	0.1170	5.10	0.49
JUN 28,84	JUN 27,84	*****	*****	*****	*****	*****	*****	*****
JUL 5,84	JUL 4,84	522.0	84.6	3.74	3.84	0.1872	9.60	1.16
JUL 6,84	JUL 5,84	529.0	42.3	4.10	4.16	0.0974	4.55	0.65



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 2,84	JAN 1,84	*****	*****	*****	*****	*****	*****	*****
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 6,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 10,84	JAN 9,84	*****	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	*****	*****	*****	*****	*****	*****	*****
JAN 15,84	JAN 14,84	*****	> 1.50	*****	*****	*****	0.750	0.1047
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 15,84	FEB 14,84	*****	*****	*****	*****	*****	*****	*****
FEB 20,84	FEB 19,84	*****	*****	*****	*****	*****	*****	*****
FEB 26,84	FEB 25,84	0.63	0.35	0.070	0.060	0.105	0.690	0.0692
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 22,84	MAR 21,84	0.63	1.09	0.125	0.060	G 0.670	0.266	0.0575
APR 5,84	APR 4,84	0.10	0.06	0.005	<T 0.010	0.030	0.104	0.0195
APR 6,84	APR 5,84	0.06	D 0.09	0.010	<T 0.005	0.020	0.110	0.0263
APR 7,84	APR 6,84	0.17	0.10	0.025	<T 0.010	0.040	0.088	0.0468
APR 14,84	APR 13,84	0.23	0.18	0.045	0.045	0.085	0.750	0.0759
APR 15,84	APR 14,84	0.12	0.08	0.025	0.010	0.040	0.105	0.0081
APR 16,84	APR 15,84	0.13	0.17	0.030	0.100	0.120	0.215	0.0138
APR 17,84	APR 16,84	0.06	0.03	D 0.015	<W 0.005	<T 0.010	0.085	*****
APR 18,84	APR 17,84	*****	*****	*****	*****	*****	*****	0.3162
APR 24,84	APR 23,84	0.18	0.08	0.025	0.035	0.040	0.260	0.0316
APR 25,84	APR 24,84	0.18	0.07	0.030	0.020	0.045	0.075	0.0182
APR 30,84	APR 29,84	G 1.01	0.41	G 0.135	0.170	0.205	0.905	0.0692
MAY 5,84	MAY 4,84	0.25	0.10	0.040	0.060	0.050	0.280	0.0240
MAY 9,84	MAY 8,84	0.32	0.14	0.050	0.025	0.050	0.340	0.0631
MAY 12,84	MAY 11,84	0.41	0.18	0.045	0.040	0.040	0.595	0.0759
MAY 13,84	MAY 12,84	*****	*****	*****	*****	*****	*****	G 0.0001
MAY 23,84	MAY 22,84	0.12	0.11	0.010	<T 0.015	0.035	0.115	0.0389
MAY 24,84	MAY 23,84	0.04	0.05	<W 0.005	<W 0.005	<T 0.005	0.130	D 0.0081
MAY 26,84	MAY 25,84	*****	*****	*****	*****	*****	*****	0.2042
MAY 29,84	MAY 28,84	0.11	0.07	0.025	<T 0.015	0.020	0.065	0.0275
JUN 10,84	JUN 9,84	1.12	0.40	0.190	0.185	0.210	1.050	0.0741
JUN 18,84	JUN 17,84	0.06	0.08	0.015	<T 0.015	0.020	0.195	0.0219
JUN 19,84	JUN 18,84	0.13	0.10	0.020	0.020	0.025	0.250	0.0468
JUN 24,84	JUN 23,84	*****	*****	*****	*****	*****	*****	*****
JUN 25,84	JUN 24,84	0.11	0.10	0.020	0.020	<W 0.005	0.600	0.1023
JUN 28,84	JUN 27,84	*****	*****	*****	*****	*****	*****	*****
JUL 5,84	JUL 4,84	0.56	0.28	0.135	0.035	<T 0.005	1.100	0.1445
JUL 6,84	JUL 5,84	0.18	0.15	0.030	<W 0.005	0.800	0.0692	



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM 809

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.		PRECIP START/END HR. HR.		SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE	
JUL 7,84	JUL 6,84	800	800	1000	1700	1	18.0	1	22319	2	1	100		
JUL 11,84	JUL 10,84	800	800	700	800	1	7.8	1	22322	2	1	105	A	
JUL 21,84	JUL 20,84	800	800	1800	1900	1	2.0	1	22323	2	1	83		H
AUG 11,84	AUG 10,84	800	800	****	****	1	10.8	1	22324	2	1	****	EFK	
AUG 14,84	AUG 13,84	800	800	****	****	1	20.4	1	22325	2	1	****	EFK	
AUG 15,84	AUG 14,84	800	800	****	****	1	14.8	1	22326	2	1	****	EFK	
SEP 2,84	AUG 22,84	800	800	****	****	1	23.0	1	22327	2	1	U 78	ACIF	Z
SEP 10,84	SEP 9,84	800	800	400	800	1	****	*	22328	2	1	****	AC	
SEP 11,84	SEP 10,84	800	800	800	1400	1	3.6	1	22329	2	1	78	C	
OCT 18,84	OCT 17,84	800	800	2000	2100	1	1.0	1	22330	2	1	60	AC	
OCT 21,84	OCT 20,84	800	800	300	745	1	2.8	*	22331	2	1	86	CD	
OCT 22,84	OCT 21,84	2400	800	1100	300	1	1.6	1	22332	2	1	67	CD	
OCT 29,84	OCT 28,84	800	800	1300	1430	1	****	*	22333	2	1	****	C	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JUL 7,84	JUL 6,84	1154.0	37.4	4.09	4.14	0.0948	3.70	0.37
JUL 11,84	JUL 10,84	527.0	45.6	3.96	4.06	0.1126	4.20	0.67
JUL 21,84	JUL 20,84	107.0	33.6	*****	G 6.57	0.0374	6.00	1.10
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 14,84	AUG 13,84	*****	*****	*****	*****	*****	*****	*****
AUG 15,84	AUG 14,84	*****	*****	*****	*****	*****	*****	*****
SEP 2,84	AUG 22,84	1151.0	25.3	*****	4.37	0.0638	2.80	0.30
SEP 10,84	SEP 9,84	154.0	27.0	*****	4.30	0.0668	2.60	0.41
SEP 11,84	SEP 10,84	182.0	46.1	*****	4.06	0.1068	4.45	0.59
OCT 18,84	OCT 17,84	39.0	*****	*****	4.18	0.1000	6.65	1.02
OCT 21,84	OCT 20,84	155.0	91.4	*****	3.79	0.2080	8.85	1.33
OCT 22,84	OCT 21,84	69.0	*****	*****	4.03	0.1302	5.45	0.67
OCT 29,84	OCT 28,84	227.0	28.0	4.34	4.42	0.0660	2.60	0.58

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : WHITMAN CREEK/DAILY/AEROCHEM #09

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JUL 7,84	JUL 6,84	0.09	0.10	0.010	0.025	<W 0.005	0.300	0.0724
JUL 11,84	JUL 10,84	0.12	0.16	0.015	0.025	0.030	0.510	0.0871
JUL 21,84	JUL 20,84	0.86	0.23	0.125	0.080	0.085	G 3.000	G 0.0003
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 14,84	AUG 13,84	*****	*****	*****	*****	*****	*****	*****
AUG 15,84	AUG 14,84	*****	*****	*****	*****	*****	*****	*****
SEP 2,84	AUG 22,84	0.33	0.06	0.040	0.035	0.050	0.175	0.0427
SEP 10,84	SEP 9,84	0.26	0.24	0.040	0.040	0.190	0.205	0.0501
SEP 11,84	SEP 10,84	0.13	0.40	0.050	0.145	0.335	0.425	0.0871
OCT 18,84	OCT 17,84	*****	0.17	*****	*****	*****	*****	0.0661
OCT 21,84	OCT 20,84	0.61	G 1.13	0.075	G 0.275	G 0.775	0.735	0.1622
OCT 22,84	OCT 21,84	*****	0.32	*****	*****	*****	0.440	0.0933
OCT 29,84	OCT 28,84	0.35	0.29	0.030	0.050	0.240	0.305	0.0380

**PART VI**

**NORTHWESTERN REGION**

**DAILY PRECIPITATION CHEMISTRY LISTINGS**

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 6,84	JAN 5,84	830 830	2100 100	2	3.0	2	32157	2	1	41	CD N
JAN 9,84	JAN 8,84	830 830	2000 300	2	1.8	2	32159	2	1	8	D N
FEB 1,84	JAN 30,84	830 830	2000 400	2	5.5	2	32158	2	1	70	C CZ
FEB 7,84	FEB 6,84	830 830	1000 1200	1	3.5	2	32160	2	1	69	D
FEB 12,84	FEB 11,84	830 830	****	2	10.8	2	32161	2	1	55	CD
MAR 5,84	MAR 4,84	830 830	****	2	5.0	3	32162	2	1	137	D N
MAR 13,84	MAR 12,84	830 830	****	2	10.4	2	32163	2	1	****	KE
MAR 18,84	MAR 17,84	830 830	****	2	4.8	2	32164	2	1	73	D
MAR 22,84	MAR 21,84	830 830	****	2	2.4	2	32165	2	1	6	D N
APR 27,84	APR 26,84	800 930	2000 2400	1	18.0	1	32167	2	1	94	H
APR 28,84	APR 27,84	930 830	2000 200	3	4.0	1	32168	2	1	72	QJ HM
APR 30,84	APR 29,84	830 830	400 700	2	2.5	3	32169	2	1	39	N
MAY 6,84	MAY 5,84	830 830	1400 1500	1	2.0	1	32170	2	1	82	
MAY 8,84	MAY 7,84	830 830	1000 200	3	24.3	1	32176	2	1	83	
MAY 9,84	MAY 8,84	830 830	900 1200	3	6.4	1	32175	2	1	46	N
MAY 11,84	MAY 10,84	830 830	1900 2000	1	8.2	1	32174	2	1	96	
MAY 12,84	MAY 11,84	830 830	****	1	1.2	1	32173	2	1	45	C N
MAY 22,84	MAY 21,84	830 830	****	1	4.5	1	32172	2	1	96	C
MAY 24,84	MAY 23,84	830 900	1000 1200	1	8.2	1	32171	2	1	86	
JUN 1,84	MAY 31,84	830 830	1500 1700	1	19.8	1	32185	2	1	104	C C
JUN 5,84	JUN 4,84	830 830	1800 2000	1	10.0	1	32186	2	1	24	GE
JUN 6,84	JUN 5,84	830 830	300 500	1	8.5	1	32187	2	1	100	
JUN 7,84	JUN 6,84	830 830	2000 100	1	8.7	1	32188	2	1	102	
JUN 10,84	JUN 7,84	830 830	300 700	1	34.2	1	32189	2	1	99	Z
JUN 12,84	JUN 11,84	830 830	500 730	1	13.8	1	32190	2	1	87	
JUN 13,84	JUN 12,84	830 830	430 530	1	6.6	1	32191	2	1	91	
JUN 22,84	JUN 21,84	830 830	400 630	1	16.0	1	32192	2	1	95	
JUN 25,84	JUN 24,84	830 830	1200 1215	1	0.1	1	32193	2	1	296	N
JUN 26,84	JUN 25,84	830 830	300 600	1	5.2	1	32194	2	1	98	
JUN 27,84	JUN 26,84	830 830	1800 1900	1	15.4	1	32195	2	1	57	F CM
JUL 2,84	JUL 1,84	830 830	1800 2000	1	12.2	1	32197	2	1	99	D H
JUL 6,84	JUL 5,84	830 830	1900 2100	1	3.6	1	32198	2	1	97	C C
JUL 7,84	JUL 6,84	830 830	830 830	1	9.8	1	32199	2	1	91	C
JUL 9,84	JUL 8,84	830 830	500 545	1	4.5	1	32200	2	1	99	C
JUL 13,84	JUL 12,84	830 830	100 530	1	25.0	1	32201	2	1	54	D H
JUL 18,84	JUL 17,84	830 830	930 1100	1	6.4	1	32204	2	1	89	C HM
JUL 26,84	JUL 25,84	830 830	****	1	0.5	1	32205	2	1	93	
JUL 31,84	JUL 30,84	830 830	100 300	1	5.6	1	32206	2	1	98	CQ
AUG 5,84	AUG 4,84	830 830	330 630	1	5.2	1	32207	2	1	92	
AUG 8,84	AUG 7,84	830 830	1430 1530	1	11.0	1	32208	2	1	60	C HC

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 6,84	JAN 5,84	79.0	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	10.0	*****	*****	*****	*****	*****	*****
FEB 1,84	JAN 30,84	250.0	6.3	*****	5.30	0.0220	0.35	0.16
FEB 7,84	FEB 6,84	157.0	44.7	*****	4.25	0.0970	4.45	G 1.42
FEB 12,84	FEB 11,84	382.0	14.0	*****	4.62	0.0464	1.35	0.19
MAR 5,84	MAR 4,84	440.0	9.0	*****	5.33	0.0292	0.85	0.25
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 18,84	MAR 17,84	226.0	38.3	*****	4.17	0.0954	3.85	0.84
MAR 22,84	MAR 21,84	10.0	*****	*****	*****	*****	*****	*****
APR 27,84	APR 26,84	1088.0	10.2	*****	G 6.30	0.0244	2.05	0.22
APR 28,84	APR 27,84	187.0	39.4	*****	G 7.43	0.0174	2.55	0.21
APR 30,84	APR 29,84	64.0	*****	*****	G 6.97	0.0182	0.35	0.02
MAY 6,84	MAY 5,84	106.0	15.7	*****	4.77	0.0420	1.75	0.38
MAY 8,84	MAY 7,84	1294.0	10.3	*****	4.79	0.0352	1.25	0.13
MAY 9,84	MAY 8,84	190.0	10.3	*****	4.65	0.0428	1.55	0.06
MAY 11,84	MAY 10,84	505.0	7.9	*****	*****	0.0176	1.10	0.29
MAY 12,84	MAY 11,84	35.0	*****	*****	*****	0.0156	0.45	0.06
MAY 22,84	MAY 21,84	279.0	6.7	*****	*****	0.0176	0.75	0.20
MAY 24,84	MAY 23,84	457.0	13.6	*****	*****	0.0264	1.45	0.42
JUN 1,84	MAY 31,84	1328.0	11.8	*****	5.60	0.0244	1.20	0.21
JUN 5,84	JUN 4,84	160.0	*****	*****	*****	*****	*****	*****
JUN 6,84	JUN 5,84	549.0	10.5	*****	5.69	0.0190	1.65	0.46
JUN 7,84	JUN 6,84	570.0	9.7	*****	G 6.70	0.0148	1.65	0.34
JUN 10,84	JUN 7,84	2177.0	4.6	*****	5.26	0.0204	0.40	0.11
JUN 12,84	JUN 11,84	777.0	7.7	*****	5.02	0.0244	0.95	0.17
JUN 13,84	JUN 12,84	388.0	6.0	*****	5.16	0.0214	0.70	0.10
JUN 22,84	JUN 21,84	981.0	25.9	*****	4.28	G 0.0708	2.80	0.37
JUN 25,84	JUN 24,84	19.0	*****	*****	G 6.17	0.0154	*****	*****
JUN 26,84	JUN 25,84	328.0	5.1	*****	6.00	0.0154	0.45	0.16
JUN 27,84	JUN 26,84	565.0	4.1	*****	5.40	0.0204	0.30	0.07
JUL 2,84	JUL 1,84	779.0	6.0	*****	5.46	0.0228	0.55	0.14
JUL 6,84	JUL 5,84	224.0	3.2	*****	5.61	0.0168	0.30	0.02
JUL 7,84	JUL 6,84	576.0	3.0	*****	5.54	0.0170	0.30	<T 0.01
JUL 9,84	JUL 8,84	286.0	8.0	*****	5.30	0.0230	0.80	0.30
JUL 13,84	JUL 12,84	873.0	9.0	*****	5.22	0.0288	1.10	0.26
JUL 18,84	JUL 17,84	367.0	2.5	*****	5.54	0.0190	0.20	0.02
JUL 26,84	JUL 25,84	30.0	*****	*****	B 6.80	B 0.3840	*****	*****
JUL 31,84	JUL 30,84	354.0	16.9	*****	4.75	0.0402	2.30	0.46
AUG 5,84	AUG 4,84	309.0	11.3	*****	5.14	0.0294	1.75	0.21
AUG 8,84	AUG 7,84	426.0	14.0	*****	5.32	0.0296	1.30	0.31

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 6,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 8,84	*****	*****	*****	*****	*****	*****	*****
FEB 1,84	JAN 30,84	0.17	0.10	0.015	<W 0.005	0.060	0.024	0.0050
FEB 7,84	FEB 6,84	0.52	0.20	0.040	0.045	0.090	1.740	0.0562
FEB 12,84	FEB 11,84	0.13	0.09	0.010	<T 0.010	0.050	0.088	0.0240
MAR 5,84	MAR 4,84	0.10	0.06	0.020	<T 0.005	0.025	0.382	0.0047
MAR 13,84	MAR 12,84	*****	*****	*****	*****	*****	*****	*****
MAR 18,84	MAR 17,84	0.34	0.20	0.050	0.020	0.090	0.690	0.0676
MAR 22,84	MAR 21,84	*****	*****	*****	*****	*****	*****	*****
APR 27,84	APR 26,84	G 0.77	0.08	0.060	0.080	0.085	0.445	G 0.0005
APR 28,84	APR 27,84	G 7.35	0.41	G 0.390	G 0.590	G 0.480	0.190	G 0.0000
APR 30,84	APR 29,84	*****	0.13	*****	*****	*****	<W 0.005	G 0.0001
MAY 6,84	MAY 5,84	0.39	0.16	0.065	0.065	0.095	0.365	0.0170
MAY 8,84	MAY 7,84	0.06	0.08	0.010	<W 0.005	<T 0.010	0.190	0.0162
MAY 9,84	MAY 8,84	0.15	0.12	0.030	0.020	0.050	0.090	0.0224
MAY 11,84	MAY 10,84	0.39	0.08	0.065	0.045	0.050	0.455	*****
MAY 12,84	MAY 11,84	*****	G 0.36	*****	*****	*****	*****	*****
MAY 22,84	MAY 21,84	0.36	0.10	0.085	0.070	0.035	0.445	*****
MAY 24,84	MAY 23,84	0.60	0.10	0.115	0.190	0.075	1.000	*****
JUN 1,84	MAY 31,84	0.29	0.09	0.035	0.030	0.030	0.350	0.0025
JUN 5,84	JUN 4,84	*****	*****	*****	*****	*****	*****	*****
JUN 6,84	JUN 5,84	0.30	0.14	0.040	0.035	0.050	0.720	0.0020
JUN 7,84	JUN 6,84	0.67	0.14	0.105	0.045	0.065	D 0.540	G 0.0002
JUN 10,84	JUN 7,84	0.12	0.10	0.010	0.020	0.025	0.060	0.0055
JUN 12,84	JUN 11,84	0.14	0.10	0.015	0.020	0.030	0.220	0.0095
JUN 13,84	JUN 12,84	0.10	0.10	0.010	<T 0.015	0.020	0.130	0.0069
JUN 22,84	JUN 21,84	0.12	0.12	0.025	<T 0.015	<W 0.005	0.300	0.0525
JUN 25,84	JUN 24,84	*****	*****	*****	*****	*****	*****	G 0.0007
JUN 26,84	JUN 25,84	0.19	0.10	0.045	0.020	0.025	0.170	0.0010
JUN 27,84	JUN 26,84	0.06	0.07	0.020	<T 0.005	0.015	0.025	0.0040
JUL 2,84	JUL 1,84	0.13	0.06	0.015	0.020	0.015	0.220	0.0035
JUL 6,84	JUL 5,84	0.13	0.06	0.020	<T 0.010	0.015	<W 0.005	0.0025
JUL 7,84	JUL 6,84	0.12	0.05	0.015	0.010	0.015	<W 0.005	0.0029
JUL 9,84	JUL 8,84	0.25	0.08	0.050	0.020	0.020	0.290	0.0050
JUL 13,84	JUL 12,84	0.30	0.07	0.065	0.020	0.020	0.310	0.0060
JUL 18,84	JUL 17,84	0.11	0.03	0.010	<T 0.010	<T 0.010	0.025	0.0029
JUL 26,84	JUL 25,84	*****	*****	*****	*****	*****	*****	B 0.0002
JUL 31,84	JUL 30,84	0.41	0.13	0.065	0.060	<T 0.005	0.550	0.0178
AUG 5,84	AUG 4,84	0.30	0.29	0.035	0.185	0.150	0.350	0.0072
AUG 8,84	AUG 7,84	0.20	0.13	0.045	0.065	0.040	0.520	0.0048



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 9,84	AUG 8,84	830 830	1530 1630	1	1.8	1	32209	2	1	21	C N
AUG 10,84	AUG 9,84	830 830	1530 1600	1	2.6	1	32210	2	1	89	HC
AUG 21,84	AUG 20,84	830 830	1200 200	1	19.7	1	32211	2	1	95	
AUG 22,84	AUG 21,84	830 830	500 600	1	1.6	1	32212	2	1	82	
SEP 4,84	SEP 3,84	830 830	1200 200	1	16.8	1	32213	2	1	92	D
SEP 10,84	SEP 9,84	830 830	1600 1700	1	4.0	1	32216	2	1	88	C
SEP 12,84	SEP 11,84	830 830	100 700	1	8.6	1	32217	2	1	87	
SEP 23,84	SEP 22,84	830 830	1100 1400	1	6.2	1	32218	2	1	87	CD
SEP 24,84	SEP 23,84	830 830	200 500	1	8.2	1	32219	2	1	95	
SEP 25,84	SEP 24,84	830 830	100 500	1	7.0	1	32220	2	1	83	
SEP 26,84	SEP 25,84	830 830	1100 1500	3	1.8	1	32221	2	1	98	C HCM
SEP 27,84	SEP 26,84	830 830	****	1	1.6	1	32222	2	1	70	C
OCT 17,84	OCT 16,84	830 830	900 800	1	28.2	1	32223	2	1	96	CQ
OCT 19,84	OCT 18,84	830 1100	2000 100	1	32.8	1	32224	2	1	99	C H
OCT 27,84	OCT 26,84	830 830	1800 2000	3	12.0	1	32227	2	1	91	C
NOV 4,84	NOV 3,84	830 830	2400 400	1	4.0	2	32228	2	1	79	C H
NOV 9,84	NOV 8,84	830 830	1800 2400	1	1.6	1	32229	2	1	115	Q
NOV 15,84	NOV 14,84	830 830	900 1200	2	3.4	2	32230	2	1	49	Q N
NOV 19,84	NOV 18,84	830 830	1200 1530	2	2.2	2	32231	2	1	38	N
NOV 26,84	NOV 25,84	830 830	1400 300	2	16.8	2	32232	2	1	94	
DEC 4,84	DEC 3,84	830 830	1000 1800	2	6.2	2	32233	2	1	57	
DEC 16,84	DEC 15,84	830 830	**** 800	1	38.3	2	32235	2	1	88	H
DEC 17,84	DEC 16,84	830 830	1200 1500	2	8.2	2	32238	2	1	****	E
DEC 22,84	DEC 21,84	830 830	****	2	3.6	2	32239	2	1	****	E
DEC 30,84	DEC 29,84	830 830	1000 1600	2	10.8	2	32240	2	1	52	C

ONTARIO MINISTRY OF THE ENVIRONMENT  
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APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 9,84	AUG 8,84	25.0	*****	*****	G 6.74	0.0218	*****	*****
AUG 10,84	AUG 9,84	149.0	6.5	*****	5.36	0.0232	0.50	0.08
AUG 21,84	AUG 20,84	1206.0	16.0	*****	4.91	0.0356	D 2.55	0.30
AUG 22,84	AUG 21,84	85.0	*****	*****	G 6.46	0.0148	0.40	0.06
SEP 4,84	SEP 3,84	994.0	4.1	*****	5.77	0.0204	0.60	0.07
SEP 10,84	SEP 9,84	227.0	5.7	*****	5.94	0.0174	0.85	0.17
SEP 12,84	SEP 11,84	484.0	10.0	*****	4.79	0.0374	1.00	0.15
SEP 23,84	SEP 22,84	349.0	17.4	*****	5.29	0.0270	3.40	0.33
SEP 24,84	SEP 23,84	503.0	7.4	*****	5.06	0.0266	0.75	0.15
SEP 25,84	SEP 24,84	374.0	6.4	*****	5.24	0.0234	0.70	0.11
SEP 26,84	SEP 25,84	114.0	3.5	*****	5.77	0.0174	0.40	0.04
SEP 27,84	SEP 26,84	72.0	22.7	*****	4.58	0.0514	2.05	0.64
OCT 17,84	OCT 16,84	1745.0	20.1	*****	4.52	0.0544	1.90	0.24
OCT 19,84	OCT 18,84	2102.0	13.2	*****	4.68	0.0396	1.15	0.20
OCT 27,84	OCT 26,84	702.0	7.3	*****	5.20	0.0240	0.85	0.16
NOV 4,84	NOV 3,84	205.0	12.2	*****	5.84	0.0204	1.80	0.48
NOV 9,84	NOV 8,84	118.0	42.5	*****	4.65	0.0562	5.30	G 1.81
NOV 15,84	NOV 14,84	107.0	39.1	*****	4.31	0.0912	4.65	G 1.40
NOV 19,84	NOV 18,84	54.0	*****	*****	*****	*****	*****	*****
NOV 26,84	NOV 25,84	1013.0	11.3	*****	4.84	0.0340	1.05	0.24
DEC 4,84	DEC 3,84	228.0	12.3	*****	4.71	0.0388	0.35	0.37
DEC 16,84	DEC 15,84	2165.0	5.6	*****	5.01	*****	0.40	0.09
DEC 17,84	DEC 16,84	*****	*****	*****	*****	*****	*****	*****
DEC 22,84	DEC 21,84	*****	*****	*****	*****	*****	*****	*****
DEC 30,84	DEC 29,84	362.0	19.2	*****	4.45	*****	1.65	0.32

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FERNBERG/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 9,84	AUG 8,84	*****	*****	*****	*****	*****	*****	G 0.0002
AUG 10,84	AUG 9,84	0.14	0.12	0.030	0.030	0.045	0.100	0.0044
AUG 21,84	AUG 20,84	0.30	0.09	0.075	0.020	<T 0.010	0.580	0.0123
AUG 22,84	AUG 21,84	0.30	0.26	0.075	0.130	0.140	0.110	G 0.0003
SEP 4,84	SEP 3,84	0.15	0.08	0.035	<W 0.005	0.020	0.155	0.0017
SEP 10,84	SEP 9,84	0.28	0.14	0.045	0.045	0.060	0.265	0.0011
SEP 12,84	SEP 11,84	0.03	0.09	0.010	0.020	0.025	0.125	0.0162
SEP 23,84	SEP 22,84	0.70	0.16	0.070	0.080	0.050	0.735	0.0051
SEP 24,84	SEP 23,84	0.10	0.11	0.010	<W 0.005	0.030	0.150	0.0087
SEP 25,84	SEP 24,84	0.14	0.14	0.015	<T 0.005	0.045	0.100	0.0058
SEP 26,84	SEP 25,84	0.10	0.13	0.015	<W 0.005	0.035	0.025	0.0017
SEP 27,84	SEP 26,84	0.60	0.28	0.105	0.035	0.120	0.400	0.0263
OCT 17,84	OCT 16,84	0.06	0.13	<W 0.005	0.015	0.040	0.200	0.0302
OCT 19,84	OCT 18,84	0.06	0.10	0.005	<W 0.005	<T 0.010	0.105	0.0209
OCT 27,84	OCT 26,84	<W 0.01	0.05	<W 0.005	<W 0.005	<W 0.005	0.290	0.0063
NOV 4,84	NOV 3,84	G 0.75	0.10	0.095	0.025	0.070	0.345	0.0014
NOV 9,84	NOV 8,84	G 1.58	0.36	G 0.130	0.080	G 0.175	1.900	0.0224
NOV 15,84	NOV 14,84	G 0.79	0.31	0.085	0.065	0.125	1.450	0.0490
NOV 19,84	NOV 18,84	*****	*****	*****	*****	*****	*****	*****
NOV 26,84	NOV 25,84	0.14	<T 0.02	0.015	0.020	0.020	0.235	0.0145
DEC 4,84	DEC 3,84	0.14	0.05	0.010	0.025	0.025	0.030	0.0195
DEC 16,84	DEC 15,84	<W 0.01	<T 0.04	<W 0.005	<T 0.010	<T 0.010	0.025	0.0098
DEC 17,84	DEC 16,84	*****	*****	*****	*****	*****	*****	*****
DEC 22,84	DEC 21,84	*****	*****	*****	*****	*****	*****	*****
DEC 30,84	DEC 29,84	0.09	0.08	<T 0.010	0.045	0.045	0.155	0.0355

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TMSP/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 3,84	JAN 2,84	830 830	400 700	2	1.8	2	33952	2	1	****	KE
JAN 4,84	JAN 3,84	830 830	200 600	2	0.2	2	33953	2	1	****	E
JAN 5,84	JAN 4,84	830 830	900 1400	2	2.3	2	33955	2	1	69	
JAN 6,84	JAN 5,84	830 830	830 2400	2	1.4	2	33957	2	1	89	
JAN 13,84	JAN 12,84	830 830	1830 830	2	1.9	2	33961	2	1	14	C N
JAN 16,84	JAN 15,84	830 830	300 600	2	0.9	2	33963	2	1	****	E
JAN 21,84	JAN 20,84	830 830	300 600	2	0.6	2	33967	2	1	****	
JAN 23,84	JAN 22,84	830 830	1300 1930	2	2.6	2	33969	2	1	82	D HCM
JAN 25,84	JAN 24,84	830 900	1500 1930	2	0.2	2	33973	2	1	****	E
JAN 27,84	JAN 26,84	830 830	1600 2000	2	1.6	2	33975	2	1	49	CD N
JAN 28,84	JAN 27,84	830 930	2100 930	2	3.6	2	33977	2	1	60	CD C
JAN 30,84	JAN 29,84	930 930	200 500	2	0.3	2	33981	2	1	****	E
FEB 1,84	JAN 31,84	830 830	2200 500	2	0.6	2	33984	2	1	91	D
FEB 3,84	FEB 2,84	830 830	1330 200	2	4.1	2	33988	2	1	46	D N
FEB 4,84	FEB 3,84	830 900	830 1700	2	0.6	2	33990	2	1	****	E
FEB 5,84	FEB 4,84	900 830	200 400	2	0.7	2	33992	2	1	****	E
FEB 13,84	FEB 12,84	830 800	1300 800	3	6.4	2	33994	2	1	82	
FEB 14,84	FEB 13,84	800 830	800 1200	3	5.2	2	33996	2	1	108	
FEB 18,84	FEB 17,84	830 830	1000 1400	3	1.6	2	33998	2	1	115	
FEB 24,84	FEB 23,84	830 830	****	2	0.3	2	34524	2	1	****	E
MAR 5,84	MAR 4,84	830 830	1730 830	2	2.2	2	34520	2	1	35	D N
MAR 6,84	MAR 5,84	830 830	830 1700	2	0.4	2	34525	2	1	****	K
MAR 11,84	MAR 10,84	830 830	1600 2400	2	0.8	2	34527	2	1	****	K
MAR 14,84	MAR 13,84	830 830	830 2400	2	1.5	2	34529	2	1	12	N
MAR 15,84	MAR 14,84	830 830	2100 2400	2	3.2	2	34531	2	1	75	
MAR 21,84	MAR 20,84	830 830	1230 830	2	6.9	2	34533	2	1	54	
APR 16,84	APR 15,84	830 830	930 1100	1	****	2	34536	2	1	****	
APR 25,84	APR 24,84	830 1100	****	1	1.3	2	34549	2	1	U 164	FJ
APR 27,84	APR 26,84	915 915	****	1	27.0	1	34538	2	1	77	
APR 28,84	APR 27,84	915 900	915 1200	3	15.7	1	34540	2	1	U 69	FJ
APR 29,84	APR 28,84	900 850	****	2	0.2	2	34553	2	1	****	K
APR 30,84	APR 29,84	850 1108	300 1108	2	10.1	2	34542	2	1	U 34	G CM
MAY 1,84	APR 30,84	1108 1012	****	2	6.2	2	34551	2	1	52	HCM
MAY 6,84	MAY 5,84	915 915	930 1200	1	16.5	1	34544	2	1	97	C
MAY 8,84	MAY 7,84	830 1030	900 1030	1	23.7	1	34556	2	1	92	
MAY 9,84	MAY 8,84	1030 930	1030 2200	1	8.9	1	34560	2	1	89	
MAY 11,84	MAY 10,84	900 900	200 600	1	2.5	1	34562	2	1	82	HM
MAY 12,84	MAY 11,84	900 900	1900 2100	1	3.0	1	34564	2	1	67	M
MAY 22,84	MAY 19,84	830 830	1500 2030	1	7.0	1	34584	2	1	80	Z
MAY 23,84	MAY 22,84	830 830	1530 1615	1	0.7	1	34582	2	1	84	CA

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ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TNSP/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	*****	*****	*****	*****	*****	*****	*****
JAN 5,84	JAN 4,84	103.0	*****	*****	5.17	0.0236	*****	*****
JAN 6,84	JAN 5,84	80.0	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	18.0	*****	*****	4.93	0.0510	*****	*****
JAN 16,84	JAN 15,84	*****	*****	*****	*****	*****	*****	*****
JAN 21,84	JAN 20,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	138.0	5.0	*****	G 5.95	0.0176	0.30	0.10
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	51.0	9.4	*****	5.30	0.0246	0.95	0.20
JAN 28,84	JAN 27,84	140.0	4.4	*****	5.85	0.0176	0.20	0.10
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 1,84	JAN 31,84	35.0	13.0	*****	5.24	0.0276	1.10	0.47
FEB 3,84	FEB 2,84	122.0	B 65.0	*****	3.90	G 0.1644	4.50	G 1.44
FEB 4,84	FEB 3,84	*****	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 13,84	FEB 12,84	339.0	21.3	*****	4.30	0.0670	2.00	0.24
FEB 14,84	FEB 13,84	362.0	7.3	*****	4.86	0.0318	0.75	0.06
FEB 18,84	FEB 17,84	118.0	12.5	*****	4.59	0.0440	1.00	0.24
FEB 24,84	FEB 23,84	*****	*****	*****	*****	*****	*****	*****
MAR 5,84	MAR 4,84	50.0	*****	*****	4.72	0.0376	*****	*****
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	12.0	*****	*****	5.44	0.0302	*****	*****
MAR 15,84	MAR 14,84	155.0	37.6	*****	4.25	0.0876	3.25	0.76
MAR 21,84	MAR 20,84	239.0	14.9	*****	4.59	0.0468	1.40	0.12
APR 16,84	APR 15,84	12.0	*****	*****	*****	*****	*****	*****
APR 25,84	APR 24,84	137.0	17.3	*****	G 6.34	0.0264	2.30	0.53
APR 27,84	APR 26,84	1335.0	21.5	*****	G 6.29	0.0262	4.20	0.57
APR 28,84	APR 27,84	700.0	17.2	*****	*****	0.0206	3.60	0.37
APR 29,84	APR 28,84	*****	*****	*****	*****	*****	*****	*****
APR 30,84	APR 29,84	221.0	3.7	*****	5.37	0.0236	0.10	0.04
MAY 1,84	APR 30,84	207.0	3.5	*****	G 5.94	0.0222	0.20	<W 0.01
MAY 6,84	MAY 5,84	1033.0	11.3	*****	5.12	0.0294	1.25	0.13
MAY 8,84	MAY 7,84	1405.0	B 27.9	*****	4.43	0.0654	3.00	0.37
MAY 9,84	MAY 8,84	510.0	D 10.4	*****	4.72	0.0484	1.25	0.02
MAY 11,84	MAY 10,84	133.0	D 20.0	*****	G 6.27	0.0206	2.70	0.62
MAY 12,84	MAY 11,84	130.0	5.5	*****	G 6.47	0.0220	0.60	0.10
MAY 22,84	MAY 19,84	363.0	13.6	*****	*****	0.0218	1.45	0.50
MAY 23,84	MAY 22,84	38.0	*****	*****	*****	0.0258	1.90	0.39

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSR/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 3,84	JAN 2,84	*****	*****	*****	*****	*****	*****	*****
JAN 4,84	JAN 3,84	*****	*****	*****	*****	*****	*****	*****
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	0.0068
JAN 6,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	*****	*****	*****	*****	*****	*****	0.0117
JAN 16,84	JAN 15,84	*****	*****	*****	*****	*****	*****	*****
JAN 21,84	JAN 20,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	0.24	0.13	0.020	<T 0.010	0.055	<W 0.002	G 0.0011
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	*****	0.39	*****	*****	*****	<W 0.002	0.0050
JAN 28,84	JAN 27,84	0.19	0.06	0.015	<T 0.010	0.065	<W 0.002	0.0014
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 1,84	JAN 31,84	*****	G 0.63	*****	*****	*****	*****	0.0058
FEB 3,84	FEB 2,84	0.18	0.18	0.015	0.040	0.070	0.840	0.1259
FEB 4,84	FEB 3,84	*****	*****	*****	*****	*****	*****	*****
FEB 5,84	FEB 4,84	*****	*****	*****	*****	*****	*****	*****
FEB 13,84	FEB 12,84	0.10	0.05	0.010	0.020	0.055	0.190	0.0501
FEB 14,84	FEB 13,84	0.08	0.03	0.010	<T 0.005	0.025	0.018	0.0138
FEB 18,84	FEB 17,84	0.23	0.14	0.020	<T 0.010	0.075	0.024	0.0257
FEB 24,84	FEB 23,84	*****	*****	*****	*****	*****	*****	*****
MAR 5,84	MAR 4,84	*****	*****	*****	*****	*****	0.052	0.0191
MAR 6,84	MAR 5,84	*****	*****	*****	*****	*****	*****	*****
MAR 11,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 14,84	MAR 13,84	*****	*****	*****	*****	*****	*****	0.0036
MAR 15,84	MAR 14,84	0.36	0.21	0.055	0.030	0.100	0.625	0.0562
MAR 21,84	MAR 20,84	0.19	0.10	0.020	<T 0.010	0.035	0.010	0.0257
APR 16,84	APR 15,84	*****	*****	*****	*****	*****	*****	*****
APR 25,84	APR 24,84	0.59	0.13	G 0.130	G 0.145	0.090	0.795	G 0.0005
APR 27,84	APR 26,84	G 1.48	0.28	G 0.140	G 0.135	G 0.190	0.810	G 0.0005
APR 28,84	APR 27,84	G 1.72	0.25	0.115	G 0.170	G 0.245	0.510	*****
APR 29,84	APR 28,84	*****	*****	*****	*****	*****	*****	*****
APR 30,84	APR 29,84	0.06	<T 0.01	0.005	0.030	<T 0.010	<W 0.005	0.0043
MAY 1,84	APR 30,84	0.05	<T 0.01	0.005	0.025	<T 0.010	<W 0.005	G 0.0011
MAY 6,84	MAY 5,84	0.12	0.20	0.010	0.050	0.130	0.260	0.0076
MAY 8,84	MAY 7,84	0.13	0.09	0.015	<T 0.015	0.020	D 0.570	0.0372
MAY 9,84	MAY 8,84	0.09	0.04	0.005	<T 0.005	0.040	0.090	0.0191
MAY 11,84	MAY 10,84	G 1.49	0.20	0.290	0.120	0.190	0.955	G 0.0005
MAY 12,84	MAY 11,84	0.53	0.07	0.105	0.085	0.075	0.115	G 0.0003
MAY 22,84	MAY 19,84	0.65	0.11	0.145	0.105	0.075	0.955	*****
MAY 23,84	MAY 22,84	*****	0.29	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWSP/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
MAY 24,84	MAY 23,84	830 830	300 830	1	3.6	1	34580	2	1	91	
MAY 25,84	MAY 24,84	830 830	830 1130	1	0.7	1	34578	2	1	55	
MAY 27,84	MAY 26,84	830 830	30 130	1	0.1	1	34576	2	1	****	E
MAY 31,84	MAY 30,84	830 830	2000 2100	1	0.6	1	34574	2	1	46	N
JUN 2,84	JUN 1,84	830 900	1945 400	1	15.2	1	34568	2	1	102	H
JUN 3,84	JUN 2,84	900 830	900 1000	1	0.1	1	34566	2	1	****	E
JUN 5,84	JUN 4,84	830 830	2200 300	1	7.5	1	34588	2	1	95	C
JUN 6,84	JUN 5,84	830 830	1030 1830	1	20.2	1	34589	2	1	100	
JUN 7,84	JUN 6,84	830 830	200 530	1	4.4	1	34593	2	1	96	
JUN 8,84	JUN 7,84	830 930	300 920	1	3.2	1	34595	2	1	87	
JUN 9,84	JUN 8,84	930 900	1530 300	1	7.6	1	34597	2	1	79	C
JUN 10,84	JUN 9,84	900 1000	1000 1000	1	7.4	1	34599	2	1	92	
JUN 11,84	JUN 10,84	1000 830	1000 1600	1	6.2	1	34601	2	1	90	C
JUN 12,84	JUN 11,84	830 830	2400 830	1	2.5	1	34605	2	1	90	
JUN 13,84	JUN 12,84	830 830	830 1830	1	18.6	1	34607	2	1	27	C N
JUN 14,84	JUN 13,84	830 830	830 1130	4	0.3	1	34611	2	1	****	EK
JUN 16,84	JUN 15,84	830 830	2100 2400	1	3.0	1	34615	2	1	100	
JUN 17,84	JUN 16,84	930 930	930 1100	4	0.2	1	34613	2	1	****	EK
JUN 18,84	JUN 17,84	930 830	930 1130	1	0.4	1	34617	2	1	****	EK
JUN 23,84	JUN 22,84	830 900	1100 1800	1	3.2	1	34619	2	1	92	
JUN 25,84	JUN 24,84	830 830	1830 1930	1	1.1	1	34621	2	1	76	
JUN 26,84	JUN 25,84	830 830	2230 2400	1	2.6	1	34623	2	1	94	C
JUN 27,84	JUN 26,84	830 830	1930 2400	1	28.4	1	34625	2	1	103	CD
JUL 3,84	JUL 2,84	830 900	1830 2400	1	10.4	1	34629	2	1	99	H
JUL 4,84	JUL 3,84	900 900	1900 1930	1	2.9	1	34631	2	1	100	HCM
JUL 5,84	JUL 4,84	900 900	1330 1350	1	5.0	1	34633	2	1	94	C
JUL 6,84	JUL 5,84	900 900	1430 2200	1	15.0	1	34635	2	1	98	M
JUL 7,84	JUL 6,84	900 900	****	1	1.2	1	34639	2	1	79	
JUL 12,84	JUL 11,84	1330 900	1900 2045	1	2.6	1	34642	2	1	87	HM
JUL 13,84	JUL 12,84	900 900	400 900	1	9.5	1	34644	2	1	U 47	G
JUL 14,84	JUL 13,84	900 900	900 1200	1	5.2	1	34646	2	1	94	
JUL 15,84	JUL 14,84	900 900	1600 1615	1	0.1	1	34648	2	1	****	EK
JUL 16,84	JUL 15,84	900 900	1000 1900	1	9.4	1	34650	2	1	U 107	FD M
JUL 18,84	JUL 17,84	900 900	900 1200	1	1.0	1	34652	2	1	70	
JUL 22,84	JUL 21,84	900 900	300 700	1	1.0	1	34654	2	1	54	
JUL 23,84	JUL 22,84	900 900	2000 2130	1	13.6	1	34656	2	1	105	C C
JUL 26,84	JUL 25,84	900 900	1400 1415	1	1.5	1	34660	2	1	86	
JUL 31,84	JUL 30,84	900 900	2030 100	1	3.9	1	34662	2	1	80	
AUG 1,84	JUL 31,84	900 900	2200 ****	1	0.6	1	34664	2	1	****	EK
AUG 7,84	AUG 6,84	900 900	1930 2030	1	2.4	1	34666	2	1	84	C



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : FORBES TWP/DAILY/AEROCHEM

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
MAY 24,84	MAY 23,84	212.0	10.4	*****	*****	0.0202	1.45	0.37
MAY 25,84	MAY 24,84	25.0	*****	*****	*****	0.0222	*****	*****
MAY 27,84	MAY 26,84	*****	*****	*****	*****	*****	*****	*****
MAY 31,84	MAY 30,84	18.0	*****	*****	*****	0.0196	*****	*****
JUN 2,84	JUN 1,84	1002.0	17.0	*****	5.12	0.0364	2.35	0.47
JUN 3,84	JUN 2,84	*****	*****	*****	*****	*****	*****	*****
JUN 5,84	JUN 4,84	459.0	16.9	*****	4.71	0.0414	1.50	0.17
JUN 6,84	JUN 5,84	1298.0	10.2	*****	5.05	0.0276	1.25	0.19
JUN 7,84	JUN 6,84	271.0	14.8	*****	4.86	0.0350	1.80	0.37
JUN 8,84	JUN 7,84	179.0	10.9	*****	4.82	0.0376	0.85	0.23
JUN 9,84	JUN 8,84	389.0	3.6	*****	5.51	0.0208	0.15	<T 0.01
JUN 10,84	JUN 9,84	441.0	4.0	*****	5.16	0.0250	0.20	0.05
JUN 11,84	JUN 10,84	361.0	3.4	*****	5.45	0.0212	0.25	0.02
JUN 12,84	JUN 11,84	145.0	6.0	*****	5.12	0.0248	0.65	0.10
JUN 13,84	JUN 12,84	326.0	5.3	*****	5.04	0.0266	0.55	0.09
JUN 14,84	JUN 13,84	*****	*****	*****	*****	*****	*****	*****
JUN 16,84	JUN 15,84	193.0	9.3	*****	4.92	0.0276	0.95	0.28
JUN 17,84	JUN 16,84	*****	*****	*****	*****	*****	*****	*****
JUN 18,84	JUN 17,84	*****	*****	*****	*****	*****	*****	*****
JUN 23,84	JUN 22,84	189.0	G 67.7	*****	3.90	G 0.1700	G 7.30	0.89
JUN 25,84	JUN 24,84	54.0	*****	*****	4.80	0.0374	1.35	0.16
JUN 26,84	JUN 25,84	157.0	8.6	*****	G 6.18	0.0160	1.20	0.24
JUN 27,84	JUN 26,84	1885.0	3.6	*****	5.20	0.0240	0.30	0.06
JUL 3,84	JUL 2,84	665.0	5.5	*****	5.26	0.0216	0.50	0.10
JUL 4,84	JUL 3,84	187.0	5.6	*****	5.36	0.0236	0.50	0.06
JUL 5,84	JUL 4,84	304.0	2.0	*****	5.56	0.0210	0.10	<W 0.01
JUL 6,84	JUL 5,84	950.0	3.1	*****	5.19	0.0240	0.25	<W 0.01
JUL 7,84	JUL 6,84	61.0	*****	*****	5.33	0.0240	0.30	<W 0.01
JUL 12,84	JUL 11,84	145.0	3.7	*****	5.11	0.0258	0.20	0.05
JUL 13,84	JUL 12,84	290.0	*****	*****	4.91	0.0276	0.50	0.12
JUL 14,84	JUL 13,84	314.0	10.1	*****	4.66	0.0414	1.00	0.10
JUL 15,84	JUL 14,84	*****	*****	*****	*****	*****	*****	*****
JUL 16,84	JUL 15,84	650.0	2.3	*****	5.43	0.0178	0.20	0.02
JUL 18,84	JUL 17,84	45.0	*****	*****	5.30	0.0202	0.15	<T 0.02
JUL 22,84	JUL 21,84	35.0	*****	*****	G 6.47	0.0220	3.45	G 1.39
JUL 23,84	JUL 22,84	916.0	4.5	*****	5.02	0.0274	0.75	0.12
JUL 26,84	JUL 25,84	83.0	*****	*****	4.79	0.0356	0.80	<W 0.01
JUL 31,84	JUL 30,84	201.0	B 31.0	*****	4.40	D 0.0658	3.95	0.73
AUG 1,84	JUL 31,84	*****	*****	*****	*****	*****	*****	*****
AUG 7,84	AUG 6,84	130.0	8.9	*****	4.98	0.0290	0.90	0.16

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
MAY 24,84	MAY 23,84	0.48	0.15	0.110	0.060	0.045	0.530	*****
MAY 25,84	MAY 24,84	*****	*****	*****	*****	*****	*****	*****
MAY 27,84	MAY 26,84	*****	*****	*****	*****	*****	*****	*****
MAY 31,84	MAY 30,84	*****	*****	*****	*****	*****	*****	*****
JUN 2,84	JUN 1,84	0.63	0.15	0.065	0.080	0.040	0.670	0.0076
JUN 3,84	JUN 2,84	*****	*****	*****	*****	*****	*****	*****
JUN 5,84	JUN 4,84	0.15	0.08	0.035	<T 0.015	0.045	0.210	0.0195
JUN 6,84	JUN 5,84	0.13	0.09	0.025	0.025	0.060	0.340	0.0089
JUN 7,84	JUN 6,84	0.40	0.17	0.080	0.025	0.120	0.355	0.0138
JUN 8,84	JUN 7,84	0.11	0.07	0.020	0.025	0.055	0.130	0.0151
JUN 9,84	JUN 8,84	0.06	0.09	0.010	0.025	0.020	0.010	0.0031
JUN 10,84	JUN 9,84	0.07	0.09	0.010	<T 0.015	0.015	0.005	0.0069
JUN 11,84	JUN 10,84	0.07	0.09	0.010	<T 0.010	0.035	0.010	0.0035
JUN 12,84	JUN 11,84	0.19	0.13	0.020	<T 0.005	0.040	0.050	0.0076
JUN 13,84	JUN 12,84	0.13	0.08	0.005	<W 0.005	<T 0.005	0.035	0.0091
JUN 14,84	JUN 13,84	*****	*****	*****	*****	*****	*****	*****
JUN 16,84	JUN 15,84	0.25	0.14	0.045	<T 0.015	0.065	0.155	0.0120
JUN 17,84	JUN 16,84	*****	*****	*****	*****	*****	*****	*****
JUN 18,84	JUN 17,84	*****	*****	*****	*****	*****	*****	*****
JUN 23,84	JUN 22,84	0.32	0.20	0.080	0.020	0.020	0.795	0.1259
JUN 25,84	JUN 24,84	*****	0.08	*****	*****	*****	*****	0.0158
JUN 26,84	JUN 25,84	0.46	0.10	0.110	0.045	0.030	0.340	G 0.0007
JUN 27,84	JUN 26,84	0.05	0.06	0.010	<T 0.005	<T 0.010	0.040	0.0063
JUL 3,84	JUL 2,84	0.13	0.06	0.020	<T 0.010	<W 0.005	0.145	0.0055
JUL 4,84	JUL 3,84	0.25	0.06	0.055	<T 0.035	<T 0.010	0.045	0.0044
JUL 5,84	JUL 4,84	0.05	0.05	0.015	<T 0.005	<W 0.005	<W 0.005	0.0028
JUL 6,84	JUL 5,84	0.04	0.05	0.010	<T 0.005	<T 0.005	<W 0.005	0.0065
JUL 7,84	JUL 6,84	*****	0.04	*****	*****	*****	*****	0.0047
JUL 12,84	JUL 11,84	0.20	<T 0.02	0.045	<T 0.015	<T 0.005	<W 0.005	0.0078
JUL 13,84	JUL 12,84	0.03	<T 0.01	0.010	0.020	<W 0.005	0.075	0.0123
JUL 14,84	JUL 13,84	<W 0.01	<T 0.01	<W 0.005	<T 0.015	0.015	0.110	0.0219
JUL 15,84	JUL 14,84	*****	*****	*****	*****	*****	*****	*****
JUL 16,84	JUL 15,84	<W 0.01	<T 0.02	0.005	<T 0.010	<W 0.005	0.010	0.0037
JUL 18,84	JUL 17,84	*****	*****	*****	*****	*****	*****	0.0050
JUL 22,84	JUL 21,84	*****	0.24	*****	*****	*****	*****	G 0.0003
JUL 23,84	JUL 22,84	0.05	<T 0.02	0.005	0.020	<W 0.005	0.190	0.0095
JUL 26,84	JUL 25,84	0.11	0.08	0.015	<T 0.010	<W 0.005	<W 0.005	0.0162
JUL 31,84	JUL 30,84	0.70	0.14	0.045	0.045	<T 0.005	0.805	0.0398
AUG 1,84	JUL 31,84	*****	*****	*****	*****	*****	*****	*****
AUG 7,84	AUG 6,84	0.10	0.08	0.010	<T 0.010	<T 0.010	0.265	0.0105

ONTARIO MINISTRY OF THE ENVIRONMENT  
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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
AUG 8,84	AUG 7,84	900 700	100 700	1	27.6	1	34668	2	1	104	
AUG 9,84	AUG 8,84	700 700	1800 1900	1	18.6	1	34672	2	1	U 68	G H
AUG 10,84	AUG 9,84	700 700	900 1700	1	3.0	1	34676	2	1	100	H
AUG 11,84	AUG 10,84	700 900	2400 900	1	0.3	1	34678	2	1	****	EK
AUG 15,84	AUG 14,84	730 900	300 500	1	2.2	1	34680	2	1	91	H
AUG 17,84	AUG 16,84	900 900	330 700	1	2.5	1	34682	2	1	85	H
AUG 20,84	AUG 19,84	900 830	100 630	1	0.4	1	34684	2	1	****	
AUG 21,84	AUG 20,84	830 830	200 600	1	15.8	1	34686	2	1	105	
AUG 22,84	AUG 21,84	830 930	2400 300	1	2.4	1	34690	2	1	89	
AUG 23,84	AUG 22,84	930 930	930 1030	1	1.0	1	34692	2	1	48	N
AUG 28,84	AUG 25,84	800 900	900 1100	1	22.0	1	34694	2	1	102	AC Z
AUG 29,84	AUG 28,84	900 900	245 330	1	5.4	1	34698	2	1	103	C
SEP 2,84	SEP 1,84	830 830	1330 1600	1	0.3	1	34700	2	1	****	EK
SEP 3,84	SEP 2,84	830 830	830 1100	1	3.0	1	34702	2	1	112	
SEP 4,84	SEP 3,84	830 830	1500 1700	1	1.4	1	34704	2	1	56	C
SEP 5,84	SEP 4,84	830 830	1445 1700	1	7.2	1	34706	2	1	93	
SEP 8,84	SEP 7,84	830 900	2100 700	1	5.8	1	34708	2	1	95	C H
SEP 10,84	SEP 8,84	900 900	1900 2030	1	4.0	1	34710	2	1	U 118	F Z
SEP 11,84	SEP 10,84	900 830	1630 2400	1	4.2	1	34712	2	1	92	C
SEP 12,84	SEP 11,84	830 830	1600 1730	1	1.0	1	34714	2	1	46	A N
SEP 13,84	SEP 12,84	830 830	1100 2100	1	6.2	1	34717	2	1	75	
SEP 15,84	SEP 14,84	830 1200	1430 1600	1	1.8	1	34719	2	1	84	C
SEP 21,84	SEP 20,84	830 830	600 800	1	0.8	1	34722	2	1	50	
SEP 24,84	SEP 22,84	830 830	1500 2000	1	6.2	1	34724	2	1	84	Z
SEP 25,84	SEP 24,84	830 830	830 830	3	6.2	1	34726	2	1	99	
SEP 26,84	SEP 25,84	830 830	830 1800	2	3.4	2	34728	2	1	92	HCM
OCT 4,84	OCT 3,84	830 830	300 830	1	0.1	1	34731	2	1	****	EK
OCT 5,84	OCT 4,84	830 830	830 1700	1	2.0	1	34733	2	1	60	C H
OCT 16,84	OCT 15,84	830 830	2100 300	1	7.8	1	34736	2	1	97	CD
OCT 17,84	OCT 16,84	830 830	2000 730	1	32.2	1	34738	2	1	96	C
OCT 19,84	OCT 18,84	830 830	300 830	1	7.6	1	34742	2	1	88	C M
OCT 20,84	OCT 19,84	830 830	830 700	1	11.6	1	34744	2	1	77	CD
OCT 21,84	OCT 20,84	830 830	830 830	1	0.4	1	34746	2	1	****	EK
OCT 26,84	OCT 25,84	830 830	1530 2300	3	1.2	1	34748	2	1	78	
OCT 28,84	OCT 27,84	830 830	1500 2000	1	4.0	1	34750	2	1	107	C HCM
OCT 31,84	OCT 30,84	700 700	800 1000	2	0.7	1	34752	2	1	102	C
DEC 6,84	DEC 5,84	900 1100	1200 1800	2	3.2	2	34754	2	1	42	N
DEC 7,84	DEC 6,84	1100 930	2300 200	2	1.2	2	34756	2	1	14	E N
DEC 17,84	DEC 15,84	900 900	1800 1500	3	52.0	2	34758	2	1	94	Z
DEC 18,84	DEC 17,84	900 900	1800 2400	2	2.7	2	34760	2	1	54	C

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
AUG 8,84	AUG 7,84	1848.0	9.0	*****	5.08	0.0264	1.05	0.22
AUG 9,84	AUG 8,84	818.0	*****	*****	5.23	0.0238	0.45	0.14
AUG 10,84	AUG 9,84	194.0	6.0	*****	D 5.37	0.0218	0.75	0.17
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 15,84	AUG 14,84	129.0	6.1	*****	5.42	0.0222	1.00	0.20
AUG 17,84	AUG 16,84	137.0	10.8	*****	5.34	0.0254	1.20	0.43
AUG 20,84	AUG 19,84	*****	*****	*****	*****	*****	*****	*****
AUG 21,84	AUG 20,84	1068.0	5.9	*****	5.24	0.0236	0.85	0.08
AUG 22,84	AUG 21,84	137.0	5.3	*****	6.09	0.0164	0.85	0.16
AUG 23,84	AUG 22,84	31.0	*****	*****	5.73	0.0188	0.40	<W 0.01
AUG 28,84	AUG 25,84	1447.0	5.7	*****	5.50	0.0214	0.70	0.17
AUG 29,84	AUG 28,84	359.0	16.3	*****	G 6.77	0.0202	2.00	0.50
SEP 2,84	SEP 1,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	217.0	9.8	*****	4.80	0.0376	0.95	0.07
SEP 4,84	SEP 3,84	51.0	*****	*****	5.79	0.0168	0.25	<W 0.01
SEP 5,84	SEP 4,84	433.0	3.0	*****	5.34	0.0230	0.20	<T 0.01
SEP 8,84	SEP 7,84	355.0	10.2	*****	5.85	0.0228	2.00	0.29
SEP 10,84	SEP 8,84	304.0	4.3	*****	5.36	0.0232	0.35	0.09
SEP 11,84	SEP 10,84	250.0	3.0	*****	5.24	0.0220	0.20	0.03
SEP 12,84	SEP 11,84	30.0	*****	*****	5.83	0.0170	0.10	0.03
SEP 13,84	SEP 12,84	301.0	12.4	*****	4.64	0.0438	1.20	0.12
SEP 15,84	SEP 14,84	98.0	5.0	*****	4.94	0.0266	0.60	<W 0.01
SEP 21,84	SEP 20,84	26.0	*****	*****	4.82	0.0364	*****	*****
SEP 24,84	SEP 22,84	335.0	13.9	*****	4.70	0.0420	1.60	0.22
SEP 25,84	SEP 24,84	397.0	B 39.0	*****	4.68	G 0.0722	0.95	0.16
SEP 26,84	SEP 25,84	201.0	2.6	*****	G 6.29	0.0222	0.15	0.03
OCT 4,84	OCT 3,84	*****	*****	*****	*****	*****	*****	*****
OCT 5,84	OCT 4,84	77.0	17.7	*****	5.83	0.0250	3.30	0.38
OCT 16,84	OCT 15,84	489.0	G 63.8	*****	3.97	G 0.1488	G 6.90	0.57
OCT 17,84	OCT 16,84	1986.0	G 31.8	*****	4.29	G 0.0762	3.05	0.36
OCT 19,84	OCT 18,84	432.0	12.0	*****	4.68	0.0376	1.00	0.09
OCT 20,84	OCT 19,84	577.0	13.2	*****	4.64	0.0414	1.15	0.13
OCT 21,84	OCT 20,84	*****	*****	*****	*****	*****	*****	*****
OCT 26,84	OCT 25,84	60.0	25.5	*****	4.47	0.0602	2.60	0.50
OCT 28,84	OCT 27,84	276.0	5.8	*****	5.25	0.0226	0.50	0.11
OCT 31,84	OCT 30,84	46.0	*****	*****	5.00	0.0284	0.40	0.19
DEC 6,84	DEC 5,84	87.0	8.5	*****	4.92	0.0290	0.35	0.27
DEC 7,84	DEC 6,84	11.0	*****	*****	*****	*****	*****	*****
DEC 17,84	DEC 15,84	3159.0	6.4	*****	5.02	*****	0.45	0.07
DEC 18,84	DEC 17,84	95.0	*****	*****	*****	*****	*****	*****

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
AUG 8,84	AUG 7,84	0.05	0.08	0.005	<T 0.005	<T 0.010	0.430	0.0083
AUG 9,84	AUG 8,84	0.14	0.07	0.025	0.020	<T 0.010	0.145	0.0059
AUG 10,84	AUG 9,84	0.30	0.10	0.060	0.075	0.040	0.145	D 0.0043
AUG 11,84	AUG 10,84	*****	*****	*****	*****	*****	*****	*****
AUG 15,84	AUG 14,84	0.23	0.06	0.035	<W 0.005	0.015	0.180	0.0038
AUG 17,84	AUG 16,84	0.39	0.10	0.070	0.060	0.040	0.440	0.0046
AUG 20,84	AUG 19,84	*****	*****	*****	*****	*****	*****	*****
AUG 21,84	AUG 20,84	0.07	<W 0.01	0.010	<W 0.005	<W 0.005	0.185	0.0058
AUG 22,84	AUG 21,84	0.24	0.03	0.055	0.035	0.040	0.255	0.0008
AUG 23,84	AUG 22,84	*****	0.06	*****	*****	*****	*****	0.0019
AUG 28,84	AUG 25,84	0.11	0.03	0.015	<W 0.005	<W 0.005	0.280	0.0032
AUG 29,84	AUG 28,84	G 1.18	0.15	0.245	0.180	0.110	0.685	G 0.0002
SEP 2,84	SEP 1,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	0.17	0.04	0.015	<W 0.005	<W 0.005	0.005	0.0158
SEP 4,84	SEP 3,84	*****	0.05	*****	*****	*****	<W 0.005	0.0016
SEP 5,84	SEP 4,84	0.07	0.04	<W 0.005	<W 0.005	<W 0.005	<W 0.005	0.0046
SEP 8,84	SEP 7,84	0.65	0.06	0.080	0.060	0.015	0.455	0.0014
SEP 10,84	SEP 8,84	0.13	0.03	0.015	<T 0.005	<T 0.005	0.050	0.0044
SEP 11,84	SEP 10,84	<T 0.01	0.05	<W 0.005	0.050	0.045	0.005	0.0058
SEP 12,84	SEP 11,84	*****	0.05	*****	*****	*****	*****	0.0015
SEP 13,84	SEP 12,84	<W 0.01	0.07	<W 0.005	<T 0.010	0.020	0.080	0.0229
SEP 15,84	SEP 14,84	<T 0.01	0.03	<W 0.005	<T 0.010	<T 0.010	0.005	0.0115
SEP 21,84	SEP 20,84	*****	*****	*****	*****	*****	*****	0.0151
SEP 24,84	SEP 22,84	0.22	0.04	0.015	<T 0.010	0.050	0.250	0.0200
SEP 25,84	SEP 24,84	0.05	B 8.20	0.010	0.015	B 5.100	0.120	0.0209
SEP 26,84	SEP 25,84	<W 0.01	0.03	<W 0.005	<W 0.005	<T 0.005	0.015	G 0.0005
OCT 4,84	OCT 3,84	*****	*****	*****	*****	*****	*****	*****
OCT 5,84	OCT 4,84	0.20	0.14	0.040	0.100	0.070	1.300	0.0015
OCT 16,84	OCT 15,84	0.05	0.14	0.010	0.035	0.050	0.805	0.1072
OCT 17,84	OCT 16,84	<T 0.02	0.11	<W 0.005	<W 0.005	0.050	0.370	0.0513
OCT 19,84	OCT 18,84	<W 0.01	0.06	<W 0.005	<W 0.005	<T 0.010	0.025	0.0209
OCT 20,84	OCT 19,84	<W 0.01	0.06	<W 0.005	<W 0.005	0.035	0.070	0.0229
OCT 21,84	OCT 20,84	*****	*****	*****	*****	*****	*****	*****
OCT 26,84	OCT 25,84	*****	0.08	*****	*****	*****	0.560	0.0339
OCT 28,84	OCT 27,84	<W 0.01	0.06	<W 0.005	<W 0.005	<W 0.005	0.140	0.0056
OCT 31,84	OCT 30,84	*****	0.06	*****	*****	*****	0.020	0.0100
DEC 6,84	DEC 5,84	0.17	<T 0.02	0.020	0.060	0.025	0.050	0.0120
DEC 7,84	DEC 6,84	*****	*****	*****	*****	*****	*****	*****
DEC 17,84	DEC 15,84	0.06	<T 0.04	<T 0.005	0.080	<T 0.005	0.015	0.0095
DEC 18,84	DEC 17,84	*****	*****	*****	*****	*****	*****	*****

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
DEC 27,84	DEC 26,84	900 1300	**** ****	2	6.5	2	34762	2	1	58	C
DEC 28,84	DEC 27,84	1300 930	**** ****	2	8.9	2	34764	2	1	64	Q

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
DEC 27,84	DEC 26,84	244.0	9.0	*****	4.82	*****	0.45	0.28
DEC 28,84	DEC 27,84	366.0	9.5	*****	4.78	*****	0.60	0.20



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : FORBES TWSP/DAILY/AEROCHEM #13

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
DEC 27,84	DEC 26,84	0.20	0.10	0.025	<T 0.005	0.070	<W 0.005	0.0151
DEC 28,84	DEC 27,84	0.10	<T 0.04	<T 0.005	<W 0.005	<T 0.010	0.015	0.0166

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 17,84	JAN 16,84	900 900	**** ****	2	****	2	32617	2	1	****	CD C
JAN 24,84	JAN 23,84	900 900	**** ****	2	7.4	2	32618	2	1	31	CD N
JAN 28,84	JAN 27,84	900 900	**** ****	2	4.5	2	32619	2	1	19	CB N
FEB 3,84	FEB 2,84	900 900	**** ****	2	****	*	32620	2	1	****	CD HM
FEB 16,84	FEB 15,84	900 900	**** ****	1	18.8	2	32621	2	1	77	CD
FEB 17,84	FEB 16,84	900 900	**** ****	3	5.6	2	32622	2	1	28	CD N
MAR 13,84	MAR 12,84	900 900	**** ****	2	2.8	2	32623	2	1	28	DC N
MAR 15,84	MAR 14,84	900 900	**** ****	2	1.4	2	32624	2	1	11	D N

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 17,84	JAN 16,84	131.0	8.0	*****	5.16	0.0260	0.45	0.19
JAN 24,84	JAN 23,84	150.0	14.1	*****	4.57	0.0470	0.50	0.44
JAN 28,84	JAN 27,84	57.0	8.7	*****	5.22	0.0238	0.75	0.23
FEB 3,84	FEB 2,84	246.0	22.7	*****	4.50	0.0588	1.45	0.85
FEB 16,84	FEB 15,84	929.0	13.2	*****	4.68	0.0434	1.15	0.29
FEB 17,84	FEB 16,84	104.0	13.0	*****	4.84	0.0394	1.15	0.38
MAR 13,84	MAR 12,84	51.0	*****	*****	4.54	0.0474	2.80	0.55
MAR 15,84	MAR 14,84	10.0	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : LAC LA CROIX/DAILY/AEROCHEM #15

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 17,84	JAN 16,84	0.16	0.08	0.015	0.040	0.085	0.056	0.0069
JAN 24,84	JAN 23,84	0.16	0.12	0.030	<T 0.005	0.060	<T 0.004	0.0269
JAN 28,84	JAN 27,84	*****	0.08	*****	*****	*****	<T 0.002	0.0060
FEB 3,84	FEB 2,84	0.28	0.10	0.010	<T 0.005	0.045	0.062	0.0316
FEB 16,84	FEB 15,84	0.15	0.06	0.010	0.020	0.055	0.142	0.0209
FEB 17,84	FEB 16,84	0.17	0.09	0.010	0.030	0.065	0.306	0.0145
MAR 13,84	MAR 12,84	*****	0.12	*****	*****	*****	0.056	0.0288
MAR 15,84	MAR 14,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JUN 24,84	JUN 23,84	900 2030	1800 630	1	6.3	1	31124	2	1	100	
JUN 28,84	JUN 26,84	900 900	2400 1800	1	33.2	1	31120	2	1	136	NZ
JUN 29,84	JUN 28,84	900 900	1820 1855	1	0.1	1	31123	2	1	****	EK
JUL 3,84	JUL 2,84	900 900	300 315	1	1.0	1	31125	2	1	71	
JUL 6,84	JUL 5,84	900 900	130 300	1	13.0	1	31126	2	1	118	
JUL 7,84	JUL 6,84	900 900	1800 2300	1	4.1	1	31129	2	1	57	C
JUL 14,84	JUL 13,84	900 900	1000 1400	1	4.0	1	31130	2	1	107	AD
JUL 15,84	JUL 14,84	900 900	1400 1600	1	10.3	1	31131	2	1	69	
JUL 16,84	JUL 15,84	900 900	2200 615	1	1.2	1	31132	2	1	88	
JUL 17,84	JUL 16,84	900 900	2200 300	1	0.8	1	31133	2	1	66	
JUL 18,84	JUL 17,84	900 900	920 2300	1	51.0	*	31134	2	1	U 73	IM H
JUL 23,84	JUL 18,84	900 900	1000 1315	1	3.1	1	31137	2	1	U 127	CIM Z
JUL 26,84	JUL 23,84	900 800	1800 2200	1	4.1	1	31138	2	1	127	D NZ
JUL 31,84	JUL 30,84	900 900	300 835	1	12.0	1	31139	2	1	119	D
AUG 1,84	JUL 31,84	900 900	900 1400	1	9.1	1	31140	2	1	97	
AUG 9,84	AUG 8,84	930 1400	930 1400	1	13.0	1	31141	2	1	108	C
AUG 16,84	AUG 15,84	900 900	920 959	1	0.1	1	31142	2	1	686	N
AUG 22,84	AUG 21,84	900 900	920 1130	1	10.1	1	31143	2	1	116	C
AUG 27,84	AUG 26,84	900 900	1400 1800	1	0.5	1	31144	2	1	115	C
SEP 3,84	SEP 2,84	900 900	1300 1800	1	1.0	1	31145	2	1	84	C
SEP 4,84	SEP 3,84	900 900	1915 1935	1	0.4	1	31146	2	1	105	
SEP 8,84	SEP 7,84	900 900	830 845	1	3.6	1	31147	2	1	102	C
SEP 9,84	SEP 8,84	900 900	935 1505	1	16.4	1	31148	2	1	103	C
SEP 10,84	SEP 9,84	900 900	2005 2315	1	5.1	1	31149	2	1	100	C
SEP 11,84	SEP 10,84	900 900	615 900	1	0.3	1	31150	2	1	20	E N
SEP 13,84	SEP 12,84	900 900	1755 2200	1	5.3	1	31152	2	1	128	C N
SEP 23,84	SEP 22,84	900 900	1810 1955	1	2.3	1	31153	2	1	105	C
SEP 24,84	SEP 23,84	900 900	330 900	1	19.3	1	31154	2	1	107	C HCM
SEP 25,84	SEP 24,84	900 900	900 1600	1	29.2	1	31155	2	1	105	N
SEP 26,84	SEP 25,84	900 900	1000 2000	1	6.4	1	31156	2	1	91	C
SEP 27,84	SEP 26,84	900 900	1800 1810	3	3.3	1	31157	2	1	106	C
SEP 28,84	SEP 27,84	900 900	100 200	1	2.1	1	31158	2	1	97	
SEP 29,84	SEP 28,84	900 900	2200 2210	1	2.0	1	31159	2	1	108	
OCT 3,84	OCT 2,84	900 900	1200 1320	1	5.3	1	31160	2	1	103	C H
OCT 4,84	OCT 3,84	900 900	530 ****	1	2.4	1	31161	2	1	111	C
OCT 16,84	OCT 15,84	900 900	2400 620	1	4.4	1	31162	2	1	118	CQ
OCT 17,84	OCT 16,84	900 900	300 830	1	4.3	1	31163	2	1	115	CQ
OCT 18,84	OCT 17,84	900 900	915 1030	1	1.2	1	31164	2	1	110	CQ
OCT 20,84	OCT 19,84	900 900	1000 2400	1	9.4	1	31165	2	1	109	CQ
OCT 22,84	OCT 21,84	900 900	430 435	1	0.3	1	31166	2	1	223	C N

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JUN 24,84	JUN 23,84	404.0	30.7	*****	4.15	0.0860	3.20	0.40
JUN 28,84	JUN 26,84	2914.0	8.3	*****	4.81	0.0336	0.70	0.16
JUN 29,84	JUN 28,84	*****	*****	*****	*****	*****	*****	*****
JUL 3,84	JUL 2,84	46.0	*****	*****	5.24	0.0248	*****	0.29
JUL 6,84	JUL 5,84	984.0	4.2	*****	5.14	0.0248	0.40	0.03
JUL 7,84	JUL 6,84	151.0	3.2	*****	5.24	0.0220	0.30	<W 0.01
JUL 14,84	JUL 13,84	275.0	17.0	*****	4.50	0.0560	1.65	0.37
JUL 15,84	JUL 14,84	462.0	14.6	*****	4.89	0.0342	1.65	0.43
JUL 16,84	JUL 15,84	68.0	*****	*****	5.26	0.0208	0.25	0.02
JUL 17,84	JUL 16,84	34.0	*****	*****	4.64	0.0400	1.20	0.22
JUL 18,84	JUL 17,84	2401.0	6.0	*****	5.01	0.0284	0.50	0.06
JUL 23,84	JUL 18,84	253.0	43.5	*****	4.35	0.0750	4.10	1.22
JUL 26,84	JUL 23,84	334.0	9.0	*****	4.78	0.0360	0.85	0.04
JUL 31,84	JUL 30,84	916.0	21.5	*****	4.67	0.0446	2.85	0.25
AUG 1,84	JUL 31,84	567.0	31.9	*****	4.52	0.0568	4.20	0.30
AUG 9,84	AUG 8,84	901.0	15.5	*****	4.87	0.0354	1.65	0.14
AUG 16,84	AUG 15,84	44.0	*****	*****	6.63	0.0234	1.90	0.61
AUG 22,84	AUG 21,84	757.0	18.5	*****	4.63	0.0426	2.10	0.16
AUG 27,84	AUG 26,84	37.0	*****	*****	4.16	0.1092	4.95	1.01
SEP 3,84	SEP 2,84	54.0	*****	*****	*****	*****	*****	*****
SEP 4,84	SEP 3,84	27.0	*****	*****	5.02	0.0298	*****	*****
SEP 8,84	SEP 7,84	236.0	47.2	*****	4.25	0.0986	6.50	0.85
SEP 9,84	SEP 8,84	1086.0	12.6	*****	4.88	0.0340	1.70	0.17
SEP 10,84	SEP 9,84	327.0	5.9	*****	5.19	0.0234	0.55	0.10
SEP 11,84	SEP 10,84	4.0	*****	*****	*****	*****	*****	*****
SEP 13,84	SEP 12,84	435.0	27.4	*****	4.30	0.0728	2.90	0.28
SEP 23,84	SEP 22,84	156.0	36.8	*****	4.31	0.0792	5.05	0.56
SEP 24,84	SEP 23,84	1326.0	3.0	*****	5.40	0.0218	0.20	0.04
SEP 25,84	SEP 24,84	1982.0	8.4	*****	4.90	0.0334	0.85	0.09
SEP 26,84	SEP 25,84	377.0	8.5	*****	4.88	0.0330	0.85	0.12
SEP 27,84	SEP 26,84	226.0	10.8	*****	4.86	0.0340	1.30	0.16
SEP 28,84	SEP 27,84	131.0	8.6	*****	5.02	0.0294	1.10	0.12
SEP 29,84	SEP 28,84	139.0	10.2	*****	4.79	0.0348	1.30	0.05
OCT 3,84	OCT 2,84	353.0	14.1	*****	6.50	0.0238	2.05	0.36
OCT 4,84	OCT 3,84	171.0	6.5	*****	6.54	0.0204	0.65	0.07
OCT 16,84	OCT 15,84	333.0	79.5	*****	3.85	0.1898	7.35	0.94
OCT 17,84	OCT 16,84	319.0	75.0	*****	3.85	0.1744	5.70	1.17
OCT 18,84	OCT 17,84	85.0	14.8	*****	4.67	0.0406	1.45	0.21
OCT 20,84	OCT 19,84	662.0	21.3	*****	4.44	0.0606	1.90	0.18
OCT 22,84	OCT 21,84	43.0	9.3	*****	4.84	0.0330	0.75	0.22

ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JUN 24,84	JUN 23,84	0.24	0.14	0.035	<T 0.010	0.015	0.210	0.0708
JUN 28,84	JUN 26,84	0.08	0.07	0.010	<W 0.005	<T 0.010	0.095	0.0155
JUN 29,84	JUN 28,84	*****	*****	*****	*****	*****	*****	*****
JUL 3,84	JUL 2,84	*****	0.14	*****	*****	*****	*****	0.0058
JUL 6,84	JUL 5,84	0.06	<T 0.01	0.010	<W 0.005	<W 0.005	0.010	0.0072
JUL 7,84	JUL 6,84	<T 0.02	<T 0.02	<W 0.005	0.020	0.025	<W 0.005	0.0058
JUL 14,84	JUL 13,84	0.22	0.08	0.045	0.050	0.025	0.275	0.0316
JUL 15,84	JUL 14,84	0.25	0.09	0.015	0.055	0.015	0.590	0.0129
JUL 16,84	JUL 15,84	*****	0.05	*****	*****	*****	<W 0.005	0.0055
JUL 17,84	JUL 16,84	*****	0.10	*****	*****	*****	*****	0.0229
JUL 18,84	JUL 17,84	<T 0.02	0.09	<W 0.005	<T 0.010	<T 0.005	0.040	0.0098
JUL 23,84	JUL 18,84	1.26	0.21	0.110	0.135	0.065	0.820	0.0447
JUL 26,84	JUL 23,84	0.07	0.05	0.025	0.030	<T 0.005	0.010	0.0166
JUL 31,84	JUL 30,84	0.23	0.08	0.040	0.030	<W 0.005	0.605	0.0214
AUG 1,84	JUL 31,84	0.19	0.19	0.035	0.110	0.100	1.000	0.0302
AUG 9,84	AUG 8,84	0.04	0.03	0.015	0.065	<W 0.005	0.400	0.0135
AUG 16,84	AUG 15,84	*****	0.16	*****	*****	*****	0.780	0.0002
AUG 22,84	AUG 21,84	0.10	0.02	0.040	0.015	<T 0.010	0.305	0.0234
AUG 27,84	AUG 26,84	*****	0.40	*****	*****	*****	*****	0.0692
SEP 3,84	SEP 2,84	*****	*****	*****	*****	*****	*****	*****
SEP 4,84	SEP 3,84	*****	*****	*****	*****	*****	*****	0.0095
SEP 8,84	SEP 7,84	1.30	0.21	0.140	0.140	0.065	0.745	0.0562
SEP 9,84	SEP 8,84	0.28	0.08	0.035	0.040	0.020	0.250	0.0132
SEP 10,84	SEP 9,84	0.05	0.09	0.005	0.035	0.040	0.120	0.0065
SEP 11,84	SEP 10,84	*****	*****	*****	*****	*****	*****	*****
SEP 13,84	SEP 12,84	0.07	0.04	<W 0.005	<W 0.005	<T 0.010	0.350	0.0501
SEP 23,84	SEP 22,84	0.59	0.14	0.080	0.055	0.075	0.845	0.0490
SEP 24,84	SEP 23,84	<W 0.01	<T 0.01	<W 0.005	<W 0.005	<W 0.005	0.015	0.0040
SEP 25,84	SEP 24,84	<W 0.01	0.03	<W 0.005	<W 0.005	0.015	0.085	0.0126
SEP 26,84	SEP 25,84	0.06	0.04	<W 0.005	<W 0.005	0.020	0.085	0.0132
SEP 27,84	SEP 26,84	0.07	0.03	0.010	0.035	0.040	0.250	0.0138
SEP 28,84	SEP 27,84	0.04	0.03	<W 0.005	<W 0.005	<W 0.005	0.265	0.0095
SEP 29,84	SEP 28,84	0.05	0.03	<W 0.005	<W 0.005	<W 0.005	0.110	0.0162
OCT 3,84	OCT 2,84	0.64	0.09	0.090	0.115	<W 0.005	0.860	0.0003
OCT 4,84	OCT 3,84	<T 0.01	0.09	0.005	0.055	0.020	0.585	0.0003
OCT 16,84	OCT 15,84	0.15	0.19	0.030	0.100	0.045	0.775	0.1413
OCT 17,84	OCT 16,84	0.08	0.18	0.010	0.215	0.200	0.640	0.1413
OCT 18,84	OCT 17,84	0.09	0.06	0.015	0.140	0.125	0.180	0.0214
OCT 20,84	OCT 19,84	0.03	0.06	<W 0.005	<T 0.010	<T 0.010	0.100	0.0363
OCT 22,84	OCT 21,84	*****	0.13	*****	*****	*****	0.005	0.0145



ONTARIO MINISTRY OF THE ENVIRONMENT  
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STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
OCT 23,84	OCT 22,84	900 900	1515 1525	1	1.1	1	31167	2	1	102	C
OCT 25,84	OCT 24,84	900 900	2210 2225	1	1.2	1	31168	2	1	109	C
OCT 26,84	OCT 25,84	900 900	**** ****	3	2.1	1	31169	2	1	87	C
OCT 28,84	OCT 27,84	900 900	1000 2000	1	21.1	1	31170	2	1	U 105	CQEG
OCT 30,84	OCT 29,84	900 900	500 900	1	8.0	1	31171	2	1	128	C N
OCT 31,84	OCT 30,84	900 900	900 1030	3	4.0	1	31172	2	1	84	C
NOV 1,84	OCT 31,84	900 900	2030 530	1	22.2	1	31173	2	1	107	C M
NOV 5,84	NOV 4,84	900 900	1030 1200	3	1.0	1	31174	2	1	79	C
NOV 9,84	NOV 8,84	900 900	915 1730	1	5.3	1	31175	2	1	107	C
NOV 15,84	NOV 14,84	900 900	1900 800	1	11.4	1	31176	2	1	109	C
NOV 16,84	NOV 15,84	900 900	1530 2300	1	2.0	1	31177	2	1	92	C

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
OCT 23,84	OCT 22,84	72.0	7.1	*****	4.96	0.0278	0.65	0.10
OCT 25,84	OCT 24,84	84.0	48.4	*****	4.28	0.0920	5.45	1.59
OCT 26,84	OCT 25,84	118.0	16.0	*****	4.57	0.0470	1.15	0.33
OCT 28,84	OCT 27,84	1433.0	*****	*****	*****	*****	*****	*****
OCT 30,84	OCT 29,84	657.0	13.0	*****	4.80	0.0366	0.85	0.44
OCT 31,84	OCT 30,84	217.0	5.3	*****	6.19	0.0160	0.55	0.12
NOV 1,84	OCT 31,84	1530.0	13.7	*****	4.63	0.0440	1.00	0.19
NOV 5,84	NOV 4,84	51.0	107.0	*****	3.84	0.2040	8.60	3.63
NOV 9,84	NOV 8,84	366.0	80.2	*****	3.99	0.1528	6.65	2.51
NOV 15,84	NOV 14,84	799.0	50.8	*****	4.03	0.1378	3.80	1.37
NOV 16,84	NOV 15,84	119.0	26.4	*****	4.46	0.0650	2.35	0.59

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

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STATION NAME : OTTER ISLAND/DAILY/AEROCHEM #17

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
OCT 23,84	OCT 22,84	*****	0.07	*****	*****	*****	0.010	0.0110
OCT 25,84	OCT 24,84	*****	0.19	*****	*****	*****	1.500	0.0525
OCT 26,84	OCT 25,84	*****	0.07	*****	*****	*****	0.140	0.0269
OCT 28,84	OCT 27,84	*****	*****	*****	*****	*****	*****	*****
OCT 30,84	OCT 29,84	0.08	0.06	0.015	<W 0.005	<T 0.010	0.350	0.0158
OCT 31,84	OCT 30,84	<T 0.01	0.26	<W 0.005	0.220	0.140	0.270	0.0006
NOV 1,84	OCT 31,84	<T 0.02	0.04	<W 0.005	<W 0.005	<W 0.005	0.055	0.0234
NOV 5,84	NOV 4,84	*****	0.39	*****	*****	*****	2.350	0.1445
NOV 9,84	NOV 8,84	1.30	0.45	0.130	0.120	0.150	1.900	0.1023
NOV 15,84	NOV 14,84	0.25	0.21	0.030	0.025	0.060	0.725	0.0933
NOV 16,84	NOV 15,84	0.13	0.10	0.015	0.025	0.140	0.520	0.0347

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JAN 5,84	JAN 4,84	900 900	**** ****	1	1.2	2	33242	2	1	****	K
JAN 9,84	JAN 5,84	900 900	1600 2400	3	3.4	2	33243	2	1	****	E Z
JAN 13,84	JAN 12,84	900 900	**** ****	2	1.2	2	33244	2	1	****	K
JAN 16,84	JAN 13,84	900 900	**** ****	2	2.4	2	33245	2	1	****	K Z
JAN 23,84	JAN 22,84	900 900	1100 2100	2	4.0	2	33246	2	1	28	C N
JAN 25,84	JAN 24,84	900 900	1000 1500	2	1.0	2	33247	2	1	****	K
JAN 27,84	JAN 26,84	900 900	1400 2100	2	2.0	2	33248	2	1	28	C N
JAN 30,84	JAN 29,84	900 1000	1200 1800	2	3.2	2	33249	2	1	****	K
FEB 3,84	FEB 2,84	900 900	1200 2000	2	9.2	2	33250	2	1	48	C N
FEB 13,84	FEB 12,84	800 800	1800 800	3	13.2	2	33252	2	1	74	
FEB 14,84	FEB 13,84	800 900	800 1000	3	3.4	2	33253	2	1	****	KE
FEB 17,84	FEB 14,84	900 900	**** ****	1	0.5	2	33254	2	1	****	E Z
FEB 24,84	FEB 23,84	900 900	930 1500	2	6.6	2	33256	2	1	87	CD
MAR 5,84	MAR 4,84	900 900	**** ****	2	1.8	2	33257	2	1	****	K
MAR 12,84	MAR 10,84	800 900	1200 1800	2	0.8	2	33258	2	1	****	E Z
MAR 15,84	MAR 14,84	900 900	1100 1800	2	3.2	2	33259	2	1	17	D N
APR 25,84	APR 24,84	900 800	**** ****	1	0.1	2	33262	2	1	233	N
APR 27,84	APR 26,84	800 800	**** 800	1	9.6	2	33263	2	1	95	
APR 28,84	APR 27,84	800 1000	1500 1800	3	11.8	2	33264	2	1	101	CM
APR 30,84	APR 29,84	800 800	**** 800	2	3.4	2	33265	2	1	9	N
MAY 1,84	APR 30,84	800 800	800 1900	2	12.2	2	33266	2	1	67	CM
MAY 4,84	MAY 1,84	800 900	**** ****	1	9.8	2	33279	2	1	58	E Z
MAY 7,84	MAY 6,84	800 800	1500 ****	1	3.0	2	33267	2	1	153	N
MAY 8,84	MAY 7,84	800 800	1700 2400	3	27.2	2	33268	2	1	82	
MAY 9,84	MAY 8,84	800 800	800 1400	3	4.8	2	33269	2	1	105	CM
MAY 11,84	MAY 10,84	800 800	1700 ****	1	10.8	2	33270	2	1	98	M
MAY 17,84	MAY 16,84	800 800	1900 2100	1	1.6	2	33278	2	1	****	E
MAY 22,84	MAY 17,84	800 800	**** ****	1	8.4	2	33277	2	1	115	Z
MAY 23,84	MAY 22,84	800 800	1500 1600	1	0.4	2	33276	2	1	265	C N
MAY 24,84	MAY 23,84	800 800	**** ****	1	1.2	2	33275	2	1	210	N
JUN 5,84	JUN 4,84	900 800	1900 ****	1	5.6	2	33272	2	1	81	
JUN 6,84	JUN 5,84	800 900	1100 ****	1	1.8	2	33280	2	1	108	
JUN 7,84	JUN 6,84	900 800	1330 ****	1	5.3	2	33281	2	1	99	
JUN 8,84	JUN 7,84	800 800	2000 800	1	13.4	2	33282	2	1	98	CM
JUN 11,84	JUN 8,84	800 800	800 1700	1	25.2	2	33283	2	1	U 91	EG Z
JUN 12,84	JUN 11,84	800 800	800 800	1	2.4	2	33284	2	1	42	N
JUN 13,84	JUN 12,84	800 800	800 1800	1	5.8	2	33286	2	1	89	
JUN 14,84	JUN 13,84	800 800	800 1100	1	0.3	2	33287	2	1	****	EK
JUN 18,84	JUN 17,84	800 800	1600 ****	1	3.8	2	33288	2	1	135	N
JUN 22,84	JUN 21,84	800 800	**** ****	1	0.4	2	33289	2	1	****	EK

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

PAGE : 2

REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	*****	*****	*****	*****	*****	*****	*****
JAN 16,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	74.0	*****	*****	5.06	0.0274	*****	*****
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	37.0	10.5	*****	4.91	0.0318	0.90	0.21
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	286.0	25.0	*****	4.34	0.0680	1.25	0.70
FEB 13,84	FEB 12,84	628.0	7.7	*****	4.74	0.0366	0.85	0.13
FEB 14,84	FEB 13,84	*****	*****	*****	*****	*****	*****	*****
FEB 17,84	FEB 14,84	*****	*****	*****	*****	*****	*****	*****
FEB 24,84	FEB 23,84	371.0	8.0	*****	4.90	0.0336	0.50	0.19
MAR 5,84	MAR 4,84	*****	*****	*****	*****	*****	*****	*****
MAR 12,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 15,84	MAR 14,84	36.0	*****	*****	4.58	0.0460	2.10	0.42
APR 25,84	APR 24,84	15.0	*****	*****	*****	0.0188	*****	*****
APR 27,84	APR 26,84	586.0	12.5	*****	G 6.27	0.0200	2.65	0.25
APR 28,84	APR 27,84	769.0	5.0	*****	G 6.28	0.0184	0.60	0.07
APR 30,84	APR 29,84	21.0	*****	*****	G 6.24	0.0220	*****	*****
MAY 1,84	APR 30,84	525.0	4.3	*****	5.32	0.0278	0.30	0.03
MAY 4,84	MAY 1,84	370.0	*****	*****	*****	*****	*****	*****
MAY 7,84	MAY 6,84	295.0	12.6	*****	4.92	0.0376	1.05	0.30
MAY 8,84	MAY 7,84	1437.0	10.7	*****	4.82	0.0398	1.25	0.05
MAY 9,84	MAY 8,84	326.0	7.3	*****	4.73	0.0408	0.95	0.22
MAY 11,84	MAY 10,84	682.0	7.3	*****	G 6.48	0.0196	0.95	0.26
MAY 17,84	MAY 16,84	*****	*****	*****	*****	*****	*****	*****
MAY 22,84	MAY 17,84	624.0	8.2	*****	*****	0.0222	0.85	0.30
MAY 23,84	MAY 22,84	68.0	*****	*****	*****	0.0176	2.10	0.33
MAY 24,84	MAY 23,84	162.0	15.7	*****	*****	0.0206	1.65	0.63
JUN 5,84	JUN 4,84	293.0	12.2	*****	4.78	0.0382	1.50	0.18
JUN 6,84	JUN 5,84	125.0	11.0	*****	4.67	0.0460	1.15	0.32
JUN 7,84	JUN 6,84	337.0	12.0	*****	5.15	0.0288	1.95	0.40
JUN 8,84	JUN 7,84	843.0	1.9	*****	5.18	0.0236	0.30	0.09
JUN 11,84	JUN 8,84	1470.0	*****	*****	*****	*****	*****	*****
JUN 12,84	JUN 11,84	66.0	*****	*****	4.96	D 0.0328	*****	*****
JUN 13,84	JUN 12,84	333.0	6.9	*****	5.01	0.0274	0.70	0.14
JUN 14,84	JUN 13,84	*****	*****	*****	*****	*****	*****	*****
JUN 18,84	JUN 17,84	330.0	9.7	*****	4.86	0.0310	0.85	0.27
JUN 22,84	JUN 21,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIM MG/L	POTASSIM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JAN 5,84	JAN 4,84	*****	*****	*****	*****	*****	*****	*****
JAN 9,84	JAN 5,84	*****	*****	*****	*****	*****	*****	*****
JAN 13,84	JAN 12,84	*****	*****	*****	*****	*****	*****	*****
JAN 16,84	JAN 13,84	*****	*****	*****	*****	*****	*****	*****
JAN 23,84	JAN 22,84	*****	*****	*****	*****	*****	*****	*****
JAN 25,84	JAN 24,84	*****	*****	*****	*****	*****	*****	*****
JAN 27,84	JAN 26,84	*****	*****	*****	*****	*****	*****	0.0123
JAN 30,84	JAN 29,84	*****	*****	*****	*****	*****	*****	*****
FEB 3,84	FEB 2,84	0.13	0.09	0.010	<T 0.015	0.050	0.346	0.0457
FEB 13,84	FEB 12,84	0.12	<T 0.02	0.010	<T 0.005	<T 0.015	0.054	0.0182
FEB 14,84	FEB 13,84	*****	*****	*****	*****	*****	*****	*****
FEB 17,84	FEB 14,84	*****	*****	*****	*****	*****	*****	*****
FEB 24,84	FEB 23,84	0.05	0.05	0.005	<T 0.010	0.020	0.106	0.0126
MAR 5,84	MAR 4,84	*****	*****	*****	*****	*****	*****	*****
MAR 12,84	MAR 10,84	*****	*****	*****	*****	*****	*****	*****
MAR 15,84	MAR 14,84	*****	0.37	*****	*****	*****	*****	0.0263
APR 25,84	APR 24,84	*****	*****	*****	*****	*****	*****	*****
APR 27,84	APR 26,84	G 0.83	0.11	0.100	0.075	0.120	0.520	G 0.0005
APR 28,84	APR 27,84	0.48	<T 0.02	0.030	0.050	0.055	0.075	G 0.0005
APR 30,84	APR 29,84	*****	*****	*****	*****	*****	*****	G 0.0006
MAY 1,84	APR 30,84	0.03	<W 0.01	<W 0.005	<T 0.005	<T 0.005	<W 0.005	0.0048
MAY 4,84	MAY 1,84	*****	*****	*****	*****	*****	*****	*****
MAY 7,84	MAY 6,84	0.22	<T 0.02	0.040	0.020	0.020	0.300	0.0120
MAY 8,84	MAY 7,84	0.03	<W 0.01	0.005	<W 0.005	<T 0.005	0.170	0.0151
MAY 9,84	MAY 8,84	0.11	<T 0.01	0.010	<T 0.005	0.015	0.045	0.0186
MAY 11,84	MAY 10,84	0.59	<T 0.02	0.090	0.045	0.035	0.400	G 0.0003
MAY 17,84	MAY 16,84	*****	*****	*****	*****	*****	*****	*****
MAY 22,84	MAY 17,84	0.27	0.08	0.060	0.020	0.015	0.730	*****
MAY 23,84	MAY 22,84	*****	0.09	*****	*****	*****	0.455	*****
MAY 24,84	MAY 23,84	0.70	0.12	0.135	0.150	0.050	1.300	*****
JUN 5,84	JUN 4,84	0.10	0.07	0.020	<T 0.010	0.020	0.275	0.0166
JUN 6,84	JUN 5,84	0.08	0.08	0.015	0.065	0.030	0.160	0.0214
JUN 7,84	JUN 6,84	0.42	0.13	0.050	0.080	0.070	0.535	0.0071
JUN 8,84	JUN 7,84	<T 0.02	0.03	0.010	0.025	0.015	0.030	0.0066
JUN 11,84	JUN 8,84	*****	*****	*****	*****	*****	*****	*****
JUN 12,84	JUN 11,84	*****	*****	*****	*****	*****	*****	0.0110
JUN 13,84	JUN 12,84	0.11	0.09	0.010	<T 0.010	0.085	0.110	0.0098
JUN 14,84	JUN 13,84	*****	*****	*****	*****	*****	*****	*****
JUN 18,84	JUN 17,84	0.13	0.13	0.015	0.025	0.060	0.210	0.0138
JUN 22,84	JUN 21,84	*****	*****	*****	*****	*****	*****	*****

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
JUN 25,84	JUN 22,84	800 800	1400 1700	1	1.4	2	33291	2	1	210	NZ
JUN 27,84	JUN 25,84	800 800	1900 ****	1	8.0	2	33292	2	1	103	Z
JUL 3,84	JUN 27,84	800 800	1700 ****	1	14.6	2	33293	2	1	113	HZ
JUL 5,84	JUL 3,84	800 800	1200 1330	1	2.2	2	33296	2	1	164	NZ
JUL 6,84	JUL 5,84	800 800	1400 1530	1	8.2	2	33297	2	1	80	HCM
JUL 12,84	JUL 11,84	800 800	1900 ****	1	10.0	1	33299	2	1	105	HCM
JUL 13,84	JUL 12,84	800 800	**** ****	1	25.0	1	33300	2	1	80	
JUL 14,84	JUL 13,84	800 800	1200 130	1	8.2	1	33303	2	1	92	C H
JUL 15,84	JUL 14,84	800 800	1000 1130	1	17.5	1	33304	2	1	86	
JUL 16,84	JUL 15,84	800 800	1400 1700	1	3.2	1	33305	2	1	94	C HCM
JUL 17,84	JUL 16,84	800 800	2000 800	1	10.0	1	33306	2	1	101	
JUL 23,84	JUL 22,84	800 800	1700 1730	1	0.6	1	33307	2	1	****	EK
JUL 26,84	JUL 25,84	800 800	1830 2100	1	26.4	1	33308	2	1	67	M
JUL 30,84	JUL 29,84	800 800	**** ****	1	0.1	1	33310	2	1	****	EK
JUL 31,84	JUL 30,84	800 800	1700 ****	1	11.2	1	33311	2	1	93	
AUG 7,84	AUG 6,84	800 800	1800 1930	1	37.4	1	33313	2	1	102	
AUG 8,84	AUG 7,84	800 800	2000 ****	1	8.8	1	33316	2	1	74	C C
AUG 9,84	AUG 8,84	800 800	2100 ****	1	11.4	1	33317	2	1	100	C C
AUG 10,84	AUG 9,84	800 800	1000 ****	1	2.4	1	33318	2	1	89	C H
AUG 14,84	AUG 13,84	800 800	**** ****	1	1.8	1	33319	2	1	72	H
AUG 15,84	AUG 14,84	800 800	2100 ****	1	15.2	1	33320	2	1	98	C
AUG 17,84	AUG 16,84	800 800	**** ****	1	0.8	1	33321	2	1	99	
AUG 21,84	AUG 20,84	800 800	1700 ****	1	26.6	1	33323	2	1	103	Q
AUG 23,84	AUG 22,84	800 800	1300 1430	1	1.2	1	33326	2	1	70	C
AUG 29,84	AUG 28,84	800 800	**** ****	1	0.4	1	33328	2	1	****	EK
SEP 3,84	SEP 2,84	800 800	1100 1300	1	3.2	1	33329	2	1	92	C H
SEP 5,84	SEP 4,84	800 800	1100 1400	1	1.2	1	33330	2	1	49	C N
SEP 9,84	SEP 8,84	900 900	2100 2300	1	4.6	1	33331	2	1	85	Q H
SEP 10,84	SEP 9,84	900 800	1000 ****	1	2.0	1	33332	2	1	85	M
SEP 11,84	SEP 10,84	800 800	1900 ****	1	8.0	1	33333	2	1	102	C
SEP 13,84	SEP 12,84	800 800	900 ****	1	2.8	1	33334	2	1	88	C
SEP 14,84	SEP 13,84	800 800	1100 1300	1	0.4	1	33335	2	1	156	C N
SEP 17,84	SEP 16,84	800 800	**** ****	1	1.1	1	33336	2	1	120	C N
SEP 21,84	SEP 20,84	800 800	**** ****	1	1.0	1	33337	2	1	71	C
SEP 23,84	SEP 22,84	930 930	**** ****	1	2.4	1	33340	2	1	****	GE
SEP 24,84	SEP 23,84	930 1000	**** 1000	1	12.0	1	33338	2	1	100	HCM
SEP 25,84	SEP 24,84	1000 800	1000 800	3	2.1	1	33339	2	1	110	HM
OCT 12,84	OCT 11,84	800 800	**** ****	1	0.3	1	33341	2	1	****	EK
OCT 16,84	OCT 15,84	800 800	1700 ****	1	1.6	1	33343	2	1	100	BC
OCT 17,84	OCT 16,84	800 800	830 800	1	21.0	1	33344	2	1	102	C



ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
JUN 25,84	JUN 22,84	189.0	6.0	*****	5.10	0.0250	0.70	0.08
JUN 27,84	JUN 25,84	530.0	5.2	*****	5.02	0.0272	0.40	0.04
JUL 3,84	JUN 27,84	1062.0	5.9	*****	5.61	0.0182	0.65	0.14
JUL 5,84	JUL 3,84	232.0	7.5	*****	4.79	0.0338	0.95	<T 0.01
JUL 6,84	JUL 5,84	424.0	3.0	*****	5.67	0.0176	0.20	<T 0.01
JUL 12,84	JUL 11,84	675.0	5.3	*****	5.54	0.0212	0.30	0.10
JUL 13,84	JUL 12,84	1291.0	5.0	*****	5.10	0.0254	0.30	0.12
JUL 14,84	JUL 13,84	487.0	10.0	*****	4.90	0.0324	0.85	0.28
JUL 15,84	JUL 14,84	967.0	10.7	*****	5.18	0.0266	1.45	0.27
JUL 16,84	JUL 15,84	194.0	2.0	*****	5.52	0.0192	<T 0.05	<W 0.01
JUL 17,84	JUL 16,84	649.0	3.0	*****	5.23	0.0230	0.15	0.03
JUL 23,84	JUL 22,84	*****	*****	*****	*****	*****	*****	*****
JUL 26,84	JUL 25,84	1134.0	6.3	*****	4.84	0.0310	0.60	0.02
JUL 30,84	JUL 29,84	*****	*****	*****	*****	*****	*****	*****
JUL 31,84	JUL 30,84	671.0	17.5	*****	D 4.77	0.0394	2.50	0.39
AUG 7,84	AUG 6,84	2455.0	7.0	*****	5.12	0.0264	0.85	0.13
AUG 8,84	AUG 7,84	418.0	9.0	*****	5.43	0.0234	0.60	0.24
AUG 9,84	AUG 8,84	736.0	7.5	*****	5.57	0.0230	0.70	0.16
AUG 10,84	AUG 9,84	138.0	6.9	*****	5.07	0.0298	0.60	0.13
AUG 14,84	AUG 13,84	84.0	*****	*****	G 6.59	0.0236	2.55	0.83
AUG 15,84	AUG 14,84	962.0	18.0	*****	4.97	0.0354	2.30	0.28
AUG 17,84	AUG 16,84	51.0	*****	*****	5.13	0.0372	2.60	0.75
AUG 21,84	AUG 20,84	1766.0	6.6	*****	5.11	0.0258	0.75	0.10
AUG 23,84	AUG 22,84	54.0	*****	*****	5.96	0.0160	0.35	0.05
AUG 29,84	AUG 28,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	190.0	6.1	*****	5.37	0.0204	0.80	0.14
SEP 5,84	SEP 4,84	38.0	*****	*****	6.09	0.0154	0.45	0.08
SEP 9,84	SEP 8,84	253.0	16.3	*****	5.08	0.0302	2.70	0.40
SEP 10,84	SEP 9,84	109.0	4.3	*****	G 6.32	0.0170	0.45	0.08
SEP 11,84	SEP 10,84	525.0	2.6	*****	5.54	0.0192	0.15	<T 0.01
SEP 13,84	SEP 12,84	159.0	12.5	*****	4.74	0.0394	1.15	0.22
SEP 14,84	SEP 13,84	40.0	*****	*****	4.96	0.0306	1.20	<W 0.01
SEP 17,84	SEP 16,84	85.0	*****	*****	4.98	0.0300	1.00	<W 0.01
SEP 21,84	SEP 20,84	46.0	25.0	*****	4.79	0.0488	2.60	0.94
SEP 23,84	SEP 22,84	*****	*****	*****	*****	*****	*****	*****
SEP 24,84	SEP 23,84	775.0	4.8	*****	5.38	0.0256	0.40	0.05
SEP 25,84	SEP 24,84	149.0	4.5	*****	5.30	0.0268	0.40	0.06
OCT 12,84	OCT 11,84	*****	*****	*****	*****	*****	*****	*****
OCT 16,84	OCT 15,84	103.0	G 29.8	*****	4.30	G 0.0778	2.70	0.31
OCT 17,84	OCT 16,84	1381.0	12.5	*****	4.65	0.0410	1.15	0.14

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
JUN 25,84	JUN 22,84	0.11	0.07	0.020	0.030	<M 0.005	0.075	0.0079
JUN 27,84	JUN 25,84	0.04	0.04	0.010	<M 0.005	<M 0.005	0.045	0.0095
JUL 3,84	JUN 27,84	0.16	0.05	0.035	<T 0.005	<M 0.005	0.250	0.0025
JUL 5,84	JUL 3,84	0.08	0.05	0.020	<T 0.005	<T 0.010	0.010	0.0162
JUL 6,84	JUL 5,84	0.05	0.10	0.010	<T 0.005	D 0.175	<M 0.005	0.0021
JUL 12,84	JUL 11,84	0.16	0.03	0.035	<T 0.010	<T 0.005	0.105	0.0029
JUL 13,84	JUL 12,84	0.05	<T 0.01	0.005	<M 0.005	<M 0.005	0.045	0.0079
JUL 14,84	JUL 13,84	0.25	0.06	0.030	0.045	0.030	0.240	0.0126
JUL 15,84	JUL 14,84	0.30	0.05	<M 0.020	0.040	<T 0.010	0.435	0.0066
JUL 16,84	JUL 15,84	0.05	<T 0.02	<M 0.005	<M 0.005	<M 0.005	<M 0.005	0.0030
JUL 17,84	JUL 16,84	<T 0.02	<T 0.01	<M 0.005	<M 0.005	<M 0.005	0.005	0.0059
JUL 23,84	JUL 22,84	*****	*****	*****	*****	*****	*****	*****
JUL 26,84	JUL 25,84	0.11	0.07	0.020	<T 0.005	<T 0.005	0.005	0.0145
JUL 30,84	JUL 29,84	*****	*****	*****	*****	*****	*****	*****
JUL 31,84	JUL 30,84	0.45	0.08	0.070	0.035	<T 0.010	0.525	D 0.0170
AUG 7,84	AUG 6,84	0.07	0.06	0.010	<T 0.010	<M 0.005	0.265	0.0076
AUG 8,84	AUG 7,84	0.14	0.04	0.040	0.030	<T 0.010	0.270	0.0037
AUG 9,84	AUG 8,84	0.17	0.04	0.045	0.030	<T 0.010	0.220	0.0027
AUG 10,84	AUG 9,84	0.20	0.06	0.035	0.030	0.030	0.070	0.0085
AUG 14,84	AUG 13,84	G 1.26	0.15	0.225	0.140	0.065	1.050	G 0.0003
AUG 15,84	AUG 14,84	0.33	0.06	0.055	0.030	<T 0.005	0.575	0.0107
AUG 17,84	AUG 16,84	*****	0.24	*****	*****	*****	0.775	0.0074
AUG 21,84	AUG 20,84	0.05	0.03	0.005	<M 0.005	<M 0.005	0.160	0.0078
AUG 23,84	AUG 22,84	*****	0.07	*****	*****	*****	0.015	0.0011
AUG 29,84	AUG 28,84	*****	*****	*****	*****	*****	*****	*****
SEP 3,84	SEP 2,84	0.32	0.11	0.070	0.045	0.080	0.055	0.0043
SEP 5,84	SEP 4,84	*****	0.18	*****	*****	*****	*****	0.0008
SEP 9,84	SEP 8,84	0.69	0.11	0.085	0.115	0.070	0.535	0.0083
SEP 10,84	SEP 9,84	0.13	0.09	0.010	0.090	0.220	0.250	G 0.0005
SEP 11,84	SEP 10,84	0.03	0.03	<M 0.005	<T 0.010	<T 0.005	0.040	0.0029
SEP 13,84	SEP 12,84	0.09	0.06	0.010	0.060	0.095	0.120	0.0182
SEP 14,84	SEP 13,84	*****	0.08	*****	*****	*****	*****	0.0110
SEP 17,84	SEP 16,84	0.14	0.05	0.015	<T 0.010	0.025	0.030	0.0105
SEP 21,84	SEP 20,84	*****	0.19	*****	*****	*****	0.815	0.0162
SEP 23,84	SEP 22,84	*****	*****	*****	*****	*****	*****	*****
SEP 24,84	SEP 23,84	<M 0.01	0.02	<M 0.005	<M 0.005	<M 0.005	0.050	0.0042
SEP 25,84	SEP 24,84	0.04	0.04	0.005	0.015	0.230	0.020	0.0050
OCT 12,84	OCT 11,84	*****	*****	*****	*****	*****	*****	*****
OCT 16,84	OCT 15,84	0.11	0.05	0.005	0.040	0.015	0.190	0.0501
OCT 17,84	OCT 16,84	<M 0.01	0.04	<M 0.005	0.015	<T 0.005	0.115	0.0224

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	SAMPLING START/END HR. HR.	PRECIP START/END HR. HR.	SAMPLE TYPE 01-RAIN 02-SNOW 03-COMP/04-OTHER	GAUGE DEPTH(MM)	GAUGE TYPE 01-STD. 02-NIPHER	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES	SAMPLER EFFICI- ENCY (%)	COMMENTS FIELD OFFICE
OCT 18,84	OCT 17,84	800 800	800 930	1	0.4	1	33347	2	1	****	EK
OCT 19,84	OCT 18,84	800 800	1700 800	1	3.2	1	33348	2	1	101	C
OCT 20,84	OCT 19,84	800 900	1700 800	1	19.1	1	33349	2	1	97	
OCT 21,84	OCT 20,84	900 1130	900 2000	1	2.8	1	33350	2	1	51	D M
OCT 22,84	OCT 21,84	1130 800	2100 800	3	2.4	1	33351	2	1	62	CD HCM
OCT 23,84	OCT 22,84	800 1330	****	1	2.6	1	33352	2	1	56	C HCM
OCT 30,84	OCT 27,84	800 800	1200 1800	3	12.0	1	33353	2	1	146	C NZ
NOV 1,84	OCT 31,84	900 900	1500 2200	3	****	1	33354	2	1	****	C
NOV 5,84	NOV 4,84	800 800	1400 1800	2	11.4	2	33355	2	1	71	CD
NOV 8,84	NOV 7,84	800 900	1700 900	1	2.0	2	33356	2	1	138	C N
NOV 15,84	NOV 14,84	900 900	1600 ****	1	3.6	2	33358	2	1	103	
NOV 16,84	NOV 15,84	900 900	1500 ****	2	4.2	2	33359	2	1	41	C NHCM
NOV 23,84	NOV 22,84	900 900	1230 1700	2	2.2	2	33361	2	1	65	CD
NOV 26,84	NOV 25,84	900 900	****	1	0.1	2	33362	2	1	****	EK
NOV 27,84	NOV 26,84	900 900	1100 900	1	1.8	2	33364	2	1	117	Q H
NOV 28,84	NOV 27,84	900 900	900 900	3	24.4	2	33365	2	1	51	
NOV 29,84	NOV 28,84	900 900	900 1100	2	0.8	2	33368	2	1	****	EKF
DEC 3,84	NOV 29,84	900 900	****	2	3.4	2	33369	2	1	22	NZ
DEC 4,84	DEC 3,84	900 900	900 1100	2	0.6	2	33370	2	1	****	EK
DEC 6,84	DEC 5,84	900 900	1000 1300	2	4.8	2	33371	2	1	41	C NC
DEC 16,84	DEC 15,84	900 900	1600 900	1	28.0	2	33373	2	1	U 22	F C
DEC 17,84	DEC 16,84	900 900	900 1600	3	17.0	2	33374	2	1	U 5	F
DEC 18,84	DEC 17,84	900 900	1900 ****	2	2.4	2	33375	2	1	****	EKF
DEC 21,84	DEC 20,84	900 900	2000 ****	2	1.4	2	33376	2	1	****	EKF
DEC 28,84	DEC 26,84	900 900	****	2	0.8	2	33377	2	1	****	EK Z
DEC 29,84	DEC 28,84	900 900	1500 ****	2	11.0	2	33378	2	1	87	

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	VOLUME ML	CONDUCT. UMHO/CM	PH FIELD	PH LAB	TOTAL H+ TO PH8.3 MG/L	SULPHATE MG/L	NITRATE AS N MG/L
OCT 18,84	OCT 17,84	*****	*****	*****	*****	*****	*****	*****
OCT 19,84	OCT 18,84	208.0	15.2	*****	4.54	0.0464	1.40	0.12
OCT 20,84	OCT 19,84	1192.0	8.7	*****	4.85	0.0324	0.65	0.11
OCT 21,84	OCT 20,84	92.0	7.1	*****	5.04	0.0278	0.55	0.12
OCT 22,84	OCT 21,84	96.0	3.0	*****	5.81	0.0188	0.15	0.05
OCT 23,84	OCT 22,84	94.0	2.5	*****	5.65	0.0190	0.20	0.02
OCT 30,84	OCT 27,84	1126.0	5.5	*****	5.71	0.0234	0.65	0.15
NOV 1,84	OCT 31,84	145.0	21.6	*****	4.43	0.0628	2.00	0.39
NOV 5,84	NOV 4,84	526.0	10.5	*****	5.97	0.0248	1.30	0.42
NOV 8,84	NOV 7,84	177.0	48.2	*****	4.12	0.1044	3.10	1.48
NOV 15,84	NOV 14,84	239.0	44.0	*****	4.22	0.0970	3.75	1.22
NOV 16,84	NOV 15,84	112.0	4.0	*****	5.56	0.0208	0.25	0.09
NOV 23,84	NOV 22,84	92.0	11.5	*****	6.19	0.0196	1.35	0.75
NOV 26,84	NOV 25,84	*****	*****	*****	*****	*****	*****	*****
NOV 27,84	NOV 26,84	136.0	22.4	*****	4.80	0.0456	4.00	1.00
NOV 28,84	NOV 27,84	809.0	9.0	*****	5.00	0.0296	0.80	0.19
NOV 29,84	NOV 28,84	*****	*****	*****	*****	*****	*****	*****
DEC 3,84	NOV 29,84	48.0	*****	*****	*****	*****	*****	*****
DEC 4,84	DEC 3,84	*****	*****	*****	*****	*****	*****	*****
DEC 6,84	DEC 5,84	127.0	7.1	*****	5.04	0.0272	0.25	0.20
DEC 16,84	DEC 15,84	411.0	6.8	*****	5.23	0.0236	0.55	0.13
DEC 17,84	DEC 16,84	60.0	*****	*****	*****	*****	*****	*****
DEC 18,84	DEC 17,84	*****	*****	*****	*****	*****	*****	*****
DEC 21,84	DEC 20,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 29,84	DEC 28,84	616.0	12.0	*****	4.74	0.0400	0.85	0.21

ONTARIO MINISTRY OF THE ENVIRONMENT  
DAILY SAMPLING ANALYSIS RESULTS  
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : QUETICO CENTRE/DAILY/AEROCHEM #14

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REMOVAL DATE	EXPOSURE DATE	CALCIUM MG/L	CHLORIDE MG/L	MAGNESIUM MG/L	POTASSIUM MG/L	SODIUM MG/L	AMMONIUM AS N MG/L	FREE H+ LAB MG/L
OCT 18,84	OCT 17,84	*****	*****	*****	*****	*****	*****	*****
OCT 19,84	OCT 18,84	<T 0.02	0.04	<M 0.005	<M 0.005	0.045	0.060	0.0288
OCT 20,84	OCT 19,84	<M 0.01	<T 0.02	<M 0.005	<M 0.005	0.095	0.040	0.0141
OCT 21,84	OCT 20,84	0.08	0.05	<M 0.005	<M 0.005	0.030	0.025	0.0091
OCT 22,84	OCT 21,84	0.03	0.16	<M 0.005	0.140	0.055	<M 0.005	0.0015
OCT 23,84	OCT 22,84	0.06	0.04	<M 0.005	<M 0.005	0.015	<M 0.005	0.0022
OCT 30,84	OCT 27,84	0.14	0.04	<M 0.005	<T 0.005	0.055	0.260	0.0019
NOV 1,84	OCT 31,84	0.22	0.10	0.020	0.045	0.040	0.235	0.0372
NOV 5,84	NOV 4,84	G 0.82	0.11	0.080	<T 0.010	0.050	0.245	G 0.0011
NOV 8,84	NOV 7,84	G 0.62	0.29	0.065	0.030	0.145	0.890	0.0759
NOV 15,84	NOV 14,84	0.30	0.18	0.025	0.030	0.050	1.150	0.0603
NOV 16,84	NOV 15,84	0.10	0.06	0.020	<T 0.010	0.040	<M 0.005	0.0028
NOV 23,84	NOV 22,84	G 0.80	0.06	0.110	0.035	0.035	0.590	G 0.0006
NOV 26,84	NOV 25,84	*****	*****	*****	*****	*****	*****	*****
NOV 27,84	NOV 26,84	G 1.49	0.10	0.090	0.125	0.040	0.880	0.0158
NOV 28,84	NOV 27,84	0.14	0.04	0.015	0.020	0.070	0.180	0.0100
NOV 29,84	NOV 28,84	*****	*****	*****	*****	*****	*****	*****
DEC 3,84	NOV 29,84	*****	*****	*****	*****	*****	*****	*****
DEC 4,84	DEC 3,84	*****	*****	*****	*****	*****	*****	*****
DEC 6,84	DEC 5,84	0.12	<T 0.01	0.020	0.015	0.015	0.010	0.0091
DEC 16,84	DEC 15,84	0.03	0.04	0.010	0.070	0.025	0.145	0.0059
DEC 17,84	DEC 16,84	0.52	*****	0.050	> 1.000	> 1.000	*****	*****
DEC 18,84	DEC 17,84	*****	*****	*****	*****	*****	*****	*****
DEC 21,84	DEC 20,84	*****	*****	*****	*****	*****	*****	*****
DEC 28,84	DEC 26,84	*****	*****	*****	*****	*****	*****	*****
DEC 29,84	DEC 28,84	0.13	0.03	0.015	0.020	0.030	0.055	0.0182

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